Ohio Cultivator

Vol. XVIII. **COLUMBUS, OCT. 1, 1862.** No. 10.

Issued on the First of every Month — Terms, Fifty Cents a Year.

SULLIVAN D. HARRIS, Editor.

Sowing Wheat.

A day or two since we were on the farm of John Johnston, of Geneva, N. Y., the noble old farmer of underdraining celebrity. He remarked: "The midge never did me much damage." For thirty years he has fed out large quantities of oil-cake, corn, &c., to cattle and sheep on his farm. He has used more or less lime and any quantity of plaster. He has raised immense crops of clover and made it into hay and fed it out to sheep. In this way he has made his land rich. At the same time he has tile-drained every field on the farm, or we might say every rod. He has laid over fifty miles of underdraining tile! His land is dry, rich, and well cultivated, and "the midge never did him much damage." No wonder that he is the great American apostle of High Farming.

The midge has taught us a great lesson—one which could not have been taught us so effectually in any other way—we must farm better. We must sow less land with grain; raise more clover; keep more stock; make more and richer manure. What land we sow to wheat must be well prepared and the seed put in early. It has taught us that it is much better to raise a thousand bushels of wheat from thirty acres than from sixty. We have learned that if the midge takes five bushels of wheat from a field that would yield 35 bushels to the acre, the loss is less than if it takes the same quantity from a crop that would yield only fifteen bushels per acre.

The proportion of loss is much greater in the one case than in the other. For every hundred bushels we obtain, 50 bushels has been destroyed by the midge; in the other, only 16 bushels. And this is assuming that the midge does as much damage on the good land as on the poor, which is by no means the case. Our motto must be, "sow only as much land to wheat as can be made rich and put in early and in good condition." This is what we have advocated for years, and experience has demonstrated its correctness.

On heavy land, we have not yet been able to dispense with summer-fallowing. John Johnston, rich as he has made his land, is yet in the habit of summer-fallowing more or less every year. His practice has been to top-dress his clover land in the fall and the next spring to plow it up, and prepare the land for wheat by plowing it twice more, with repeated harrowings rolling, &c. In other words, he manures the land in the fall and then gives it a good old-fashioned summer-fallow.

Latterly, since his land has been brought into such high condition, he occasionally takes off a crop of barley and sows wheat after it. In this case, as soon as the barley is off he plows it as shallow as possible to start the barley which may have been shed, seeds of weeds, &c. Then as soon as they are started, plow them under and sow wheat. On lighter soils the wheel cultivator may be used to start the seeds, &c,

Wheat is usually earlier on a summer-fallow than after barley or oats—and this in midge times is a very important point.

In England, wheat is almost invariably sown on a clover sod, one or two years old, at one plowing. The land is turned over in shallow, narrow furrows, and the wheat sown immediately. Some farmers sow every day close up to the plow. We sow so much earlier in this country than they do in England, and the grass has, therefore, so much better chance to grow, that we have thought this method could not often be practiced with advantage, but we find

PAGE (S) MISSING NOT AVAILABLE

yield about 40 bushels per acre—specimens sent weighing 54 and 56 pounds per bushel. In he Western counties Indian corn proves a most

will more and more and more require the combination of skill with mere force and that a large number of well qualified men is being and

faction has sought to break up that government, divide the energies of the nation, and divert the pursuits of wealth and happiness, by splitting up the Union into small nationalities, that could

way to the markets of Europe, where it is readily taken up at prices remunerative to our producers.

Were our tariffs such as to admit of liberal

to the smallness of the stalk and the hard shell or rind encasing it. If left standing until it is perfectly ripe, it is useless. For instance, I had a patch of half an acre; one-half I worked up when the seed was in the dough; the sirup was quite fair; a part, in ten days later, was quite inferior; also a part later, but before it received any frost, that was worthless. The red headed Imphee takes as long to ripen as Sorghum, is much smaller, and suckers much worse than Sorghum or Imphee; yet it makes a very good article of sirup, but not equal to Sorghum. There is but one advantage in raising early Imphee, and that is the certainty of ripening before frost.—*Cor. Iowa Homestead.*

Agricultural Productions of Nova Scotia.

Nova Scotia has already become somewhat famous for its apples. The crop is generally sure and large, all sorts which in England require a wall or espallier, will here grow and thrive in the open orchards. In 1860, 186,483 bushels of apples were raised in the Province, Annapolis county raising 65,406 boushels. Mr. R. Starr, of King county, and Mr. W. Chesley of Annapolis county, contributed to the preliminary local exhibition at Halifax, no less than 50 varieties of apples raised in their own orchards. The fruit attains an enormous size. A specimen of the "Gloria Mundi" sent to England measured from 15 to 16 inches in circumference. Hardy kinds of grapes, will, in the Western counties do well out of doors. During the past year the "Black Hambro" and "White Cluster" ripened in the open air. The pear—hardy sorts—plums, cherries and tomatoes do finely—the latter fruit and ripen well in the open air. The squash and pumpkin have been grown of 140 and 170 pounds weight. Onions grow well and yield large crops—indeed, this may be said of all kinds of root crops. Specimens sent to England measure 17 inches in circumference.—A native potato is found in the woods, which the Indians use as food. Potatoes yield on an average about 230 bushels per acre, and the tuber is less affected by disease than in other countries. In 1860, 9,284,964 bushels were raised. Wheat, imperfect cultivation, yields from 25 to 30 bushels per acre—specimens sent to England weigh 62 and 64 pounds per bushel. Barley is a sure and heavy crop; the Bald Barley will yield about 40 bushels per acre—specimens sent weighing 54 and 56 pounds per bushel. In he Western counties Indian corn proves a most profitable crop; yield 60 or 66 bushels per acre. Specimens sent weigh 60 pounds per bushel. Buckwheat thrives well—specimens sent weighing as much as 56 lbs. per bushel. Garden and field seeds, of all kinds, grow remarkably well, and produce profitable returns.—*Halifax Journal.*

The Forces Used in Agriculture.

Mr. J. C. Morton, in a paper read before the London Society of Arts, remarks: Agriculture is experiencing the the truth taught in the history of all other manufactures—that machinery is, in the long run, the best friend of the laborer. This truth is taught even more impressively by a review of agriculture than by the case of any single farm. Here are twenty-one millions of people, producers and consumers, living on this island, (England, Scotland and Wales,) as it were on a great farm, which we may, by the help of such statistics as we possess, describe as nearly 19,000,000 arable acres, and probably nearly as much grass, employing as farm labor, in-door and out, about 950,000 men and 120,000 women, besides about 300,000 lads and about 70,000 girls, or, averaging them by their probable wages, as has been done before, let us say equal in all to 1,500,000 horses, of which probably 800,000 are strictly for farm purposes. We are annually inventing and manufacturing labor-saving machines at an extraordinary rate, and every year at least 10,000 horses are added to the agricultural steam power of the country, certainly displacing both animals and men to some extent. We have taken the flail out of the hand of the laborer, and the reaping hook is going; on many a farm he no longer walks between the handles of the plow; he no longer sows the seed; He does but a portion of the hoeing and the harvesting; and yet so far as to being able to dispense with his assistance, he is more in demand than ever.

Within the past ten years, upwards of 40,000 horse power has been added to the forces used in agriculture in steam alone in Great Britain. In the harvest of 1859 in Great Britain 4,000 reaping machines were probably at work, capable of cutting more in a day than 40,000 able bodied laborers; and yet labor during all this period was in demand, and wages instead of decreasing, advanced.

That the services of the agricultural laborer will more and more and more require the combination of skill with mere force and that a large number of well qualified men is being and

will be needed, seems plain. That horse power will be displaced by steam at least two-fifths, I believe; and in this direction there is scope enough for many years to come for all our agricultural mechanics. Furthermore, it is plain that if we can take a considerable proportion of the mere labor of the farm out of the hands of the laborer, and put it into the hands of a steam power for its performance, there is an enormous amount of saving to be made in the cost of agricultural production. It is plain that it is mere folly in the laborer to think that, as regards the *mere* labor of the land, he can compete with either steam power or with horse power. Strength of body is desirable, and sinew hardened by long practice in hard labor has a considerable marketable value,for that, however hardly it may sound, is the aspect of the matter in which the interests of the laborer most directly appear; but it is plain that for sheer lift and the mere putting forth of force, horse power, and still more that of untiring steam, must grind the soul out of anyboby that shall pretend to competition with them. It is in the cultivation not so much of mere strength of body as of skill and intelligence that the safety of the laborer lies, and in his capability for education he is perfectly secure.

Agricultural Progress.

It is necessary, occasionally, to remind our selves what sort of country it is whose integrity we have gone to war to preserve. We are not contending for the preservation of a worn out and sterile territory; but for a young and virgin country, whose immense resources are only beginning to be developed. We have gone to war in behalf of a country more wealthy in natural resources than the whole area of Europe, and which has yielded its wealth with an ampler remuneration for labor than anything that could be produced from the history of the Old World. Nature has for ages been treasuring up immense agricultural resources on the surface of the soil, and untold mineral wealth beneath it. Within late years, the most enterprising and industrious of the world's population have been flocking to this virgin continent, to reap its long-stored treasure. Their efforts have been aided and protected by the most benificent and least onerous of all forms of government. A dissatisfied faction has sought to break up that government, divide the energies of the nation, and divert the pursuits of wealth and happiness, by splitting up the Union into small nationalities, that could only waste and devastate the continent by a state of civil war. Surely the preservation of the permanent peace and union of such a country is not an object for which the enormous expenditures of the present war are too costly. To illustrate the value of our national resources, it may be well to instance the splendid agricultural progress of the country during the ten years ending with 1860. The census for 1860, an abstract of which has been published, gives the following comparative statement of the agricultural produce of the United States:

Articles.	1849.	1859.
Wheat, bush., - -	100,485,944	171,183,381
Indian corn, bush.,	592,071,104	830,451,707
Cotton, bales, - -	2,445,793	5,196,944
Butter, lbs., - -	248,675,322	460,509,354
Cheese, lbs., - -	105,535,893	105,875,135
Animals, slaught'd,	$111,703,142	$212,871,653
Sheep, No., - - -	21,723,210	23,317,756
Wool, lbs., - - -	52,512,959	60,511,343
Sugar Cane, lbs., -	237,133,000	302,255,000
Molasses, gallons, -	12,700,991	16,337,080
Sugar, Maple, lbs.,	34,253,436	38,863,884
Tobacco, lbs., - -	190,752,655	429,390,771
Wine gallons, - -	221,249	1,260,008
Hay, tons, - - -	13,838,645	19,129,128
Orchard, good, - -	$7,723,186	$19,753,361

These figures show a marvelous rate of development of the material resources of the country. On the average, the increase in the aggregate value of agricultural products during the ten years, is more than double the ratio of increase in the population. The product of wheat in 1859, exceeded that of 1849 by over seventy million bushels, which is an increase of seventy per cent. The growth of population for the decade has been about thirty-five per cent., or one-half the increase of the wheat crop. This shows that we are steadily increasing our surplus product of breadstuffs, and putting ourselves in a position for supplying the deficiencies of certain of the grain-growing countries of Europe. A similar increase has occurred in the product of butter, the yield of which has enlarged to the extent of 211,800,000 lbs. The value of slaughtered animals has increased over ninety per cent.; which is another illustration of the tendency of this country to become the first of the great food-producing countries of the world. Every year, the surplus of cereals and animal food over the wants of our own consumption is rapidly increasing. This surplus finds its way to the markets of Europe, where it is readily taken up at prices remunerative to our producers.

Were our tariffs such as to admit of liberal

Manhaden, the fish principally used for manure, are very fat, and fat is composed to a very large extent of carbon. In the process of animal decay the carbon is separated mostly in combination with oxygen as carbonic acid, and if the separation takes place immediately under green leaves, a considerable portion of the carbonic acid will be caught by the leaves, and appropriated to the growth of the vegetable.—*Scientific American.*

Drainage.

The following interesting remarks are from a communication by Patrick Matthew, in the Mark Lane Express:

I have noticed it repeatedly stated, that the upper ends of drains should communicate with the surface air—that such an effect in ærating the ground from the drain upwards, so as to render the soil more permeable by, and more nutritive to the roots of plants. No doubt exists of air in the soil, and especially of ærated earth, being necessary to the health of most land plants. This is a subject of importance, and ought to meet the attention of every drainer, especially as such communication with the air must render the flow of drains much more speedy. Every one is aware that a tea-pot or a barrel does not flow out readily from the mouth or spigot unless there is access to air from above. So must it be with drains. Another advantage of an opening to the surface at the upper end, would be that the position of each drain could thus be known, and even its efficiency proven, by pouring in water at the top. As such an opening in the field itself would be in the way of the labor, the pipe communication with the surface would therefore require, if possible, to be at the upper end or extremity of the field, clear of the plowed space, and protected by a close grating, or cover pierced with small holes, so that nothing but air might enter. In laying the drain tile pipes it is often the practice to cover any defect or opening with a small portion of broken tile. This is not safe, as a rat or mole in pursuit of worms, snails, or water (worms and snails seek down in search of moisture in time of drought, and to escape from cold in time of severe frost) will often penetrate down to the tile, and if the broken piece cover any aperture be not of considerable size and weight, and firmly placed, they force it aside or scraping the earth away loosen it, so as to make entry themselves into the drain, or force earth nto it sufficient to obstruct it. Another important necessity is that such drains have no standing water in the bottom, in consequence of any slight mistake of level; but have a gentle decent throughout from the top, the tiles level to each other, joining closely, and the drain junctions carefully fitted. Few men by the piece can be entrusted with this.

Much attention and judgment is required in our various soils and subsoils to determine the best depths of drains and width betwixt them; also if a few reeds, broom, etc., be required above the tile to conduct the water in the soil to the tile joinings. It is only in the poorest and most plastic clays that such can be necessary. I have sometimes heard complaints of the drains in poor plastic clays not being efficient—not drawing to any distance; and not even draining the surface immediately above the drain. I have always answered such complaints by telling the farmer to blame himself for such—that was owing to the poverty of his land—that by high farming, working his land in seasonable dry weather, and enriching it by plenty of manure his drains would become effective: that plenty of rich organic manures would generate a sufficiency of red earthworms, and their boring render his land honeycombed like a piece of old sea timber.

To render clay land dark in color, light in weight, friable, crumbly—what we term *sterny*, in little particles like stars, so as not to bind in a dense hard body in drought with large surface cracks, nor its clods to melt down in winter into a sticky pulp—is the excellence of clay farming. This condition of clay soil can only be attained by the continued application of large quantities of organic manures, æration, exposure to the winter frost, and summer drought, with lenient cropping, and particularly by well-laid-down pasturage. This last gives a turfy charac ter to the soil, the opposite of agglutinated; a sterny, slightly adhesive consistency, bound together by the grass rooting, and not melting into pulp under rain. Yard manures give a different crumbliness, but both are opposed to the plastic or gluey, both favorable to vegetable growth, and both render the plant more able to withstand the excess of rain or drought, or the throwing out by winter frost. It is rather a curious fact that vegetable matter in the soil, in the condition of peat, is much disposed to throw out the plant in frost, and does so, from the wet, spongy, peaty soil, by the crystallization of the water heaving up in honeycomb or basaltic fashion. It clasps the plant stem at the surface

of the ground, and as it expands underneath, tears up the plant from its rooting.

Need I mention that as drains come to be made deeper, the attention is the more required to have the tiles well burned, free of twist, and without flaw, and to be carefully laid, with gradual fall—at least without stagnating water in any part, the place of any stoppage afterwards being, in deep drains, more difficult to be found and the stoppage removed? In all cases a free outfall must be got, not subject to be occasionally flooded, otherwise be pipes may get mudded up.

Fall Plowing.

So soon as the small grains are harvested, no time should be lost in putting the plow to work. The stubble should be turned under with a shallow furrow, that the grain shattered out on the ground may come up for fall feed for stock, and to rot the weeds and other trash that covered the surface; besides this, if again plowed in the spring, the plow can go below the old furrow and not turn up, but turn under still deeper the seeds of weeds. Some years since, we took a good lesson in this mode of plowing: we deeply fall-plowed some three acres intended for spring rape; this we again plowed the last of May The surface at the time was almost free of weeds and would have done well if it had been sown with rape; but we were bound for a good crop, and in went the plow up to the beam, but just reaching the bottom of the fall furrow. The result was the bringing to the surface all the seeds of the last year's crop of weeds and unrotted stubble. The rape was sown, and the result was a fine crop of weeds, which soon choked out the rape; but it has proved a valuable lesson both to us and to others.—*Illinois Farmer.*

Surface Application of Manure.

From the result of various trials, Professor Voelcker seems to lean to the opinion that the spreading of farmyard compost on the surface of the soil, for even a considerable period before it is plowed in, is by no means so injurious a practice as we have hitherto been led to suppose. He says, "that on all soils with a moderate proportion of clay, no fear need be entertained of valuable fertilizing substances becoming wasted, if the manure cannot be plowed in at once. Fresh, and even well-rotted dung contains very little free ammonia; and since active fermentation, and with it the farther evolution of free ammonia, is stopped by spreading out the manure on the field, valuable manuring matters cannot escape into the air by adopting this plan." If this a reasonable conclusion, it goes far to remove our dread of losing, on such soils, the better portions of farmyard manure by top-dressings. As the season will soon be here when these dressings are commonly applied to grass, it will be useful to remember this fact.

The best time for applying the manure is held by the great Cheshire grass farmers, to be in the end of September or the beginning of October, particularly in a showery period, as the grass soon covers it, and renders it less liable to be damaged by the sun or drying winds.—*Mark Lane Express.*

Sugar Cane.--Culture and Selection.

We have three different kinds of cane here, at this time. First, the original Sorghum, that was first imported into the country, and two varieties of Imphee, the red and the black headed The black headed came from your office while in Dubuque. I generally manage to plant my cane about the first of May, Sorghum especially; Imphee might be planted later. I have tried separately the plan of soaking and sprouting seed before planting, with the following results. If the ground is moist and mellow, so as to keep the young sprouts growing, it is an advantage. If dry, as ground is apt to be after being plowed a few days, the young sprouts will die and prove a failure. I generally prefer planting dry seed in newly prepared ground. The young cane requires to be kept clean by hoeing and plowing. If the ground has been plowed deeply, and planted early, good cane can be had from our poorest soils. By manuring our soil, I am satisfied that cane will mature some two weeks earlier, and at the same time without diminishing the saccharine qualities of the juice. I know this is contrary to the experience of some of your correspondents; but I am satisfied, with my experience, that such is the case.

The question then arises, what is the best kind of cane to raise? My answer to that query is, Sorghum. I have tried Sorghum for five years in this State. The black headed Imphee, two; the red, one. The black headed seed I procured of you, at Dubuque. If it is worked up while the seed is in the milk, a very good article of sirup may be made, but in less quantity from the same number of gallons of juice than from Sorghum. I also found it to be less juicy, and much harder to crush than Sorghum, owing

Manhaden, the fish principally used for manure, are very fat, and fat is composed to a very large extent of carbon. In the process of animal decay the carbon is separated mostly in combination with oxygen as carbonic acid, and if the separation takes place immediately under green leaves, a considerable portion of the carbonic acid will be caught by the leaves, and appropriated to the growth of the vegetable.—*Scientific American.*

Drainage.

The following interesting remarks are from a communication by Patrick Matthew, in the Mark Lane Express:

I have noticed it repeatedly stated, that the upper ends of drains should communicate with the surface air—that such an effect in ærating the ground from the drain upwards, so as to render the soil more permeable by, and more nutritive to the roots of plants. No doubt exists of air in the soil, and especially of ærated earth, being necessary to the health of most land plants. This is a subject of importance, and ought to meet the attention of every drainer, especially as such communication with the air must render the flow of drains much more speedy. Every one is aware that a tea-pot or a barrel does not flow out readily from the mouth or spigot unless there is access to air from above. So must it be with drains. Another advantage of an opening to the surface at the upper end, would be that the position of each drain could thus be known, and even its efficiency proven, by pouring in water at the top. As such an opening in the field itself would be in the way of the labor, the pipe communication with the surface would therefore require, if possible, to be at the upper end or extremity of the field, clear of the plowed space, and protected by a close grating, or cover pierced with small holes, so that nothing but air might enter. In laying the drain tile pipes it is often the practice to cover any defect or opening with a small portion of broken tile. This is not safe, as a rat or mole in pursuit of worms, snails, or water (worms and snails seek down in search of moisture in time of drought, and to escape from cold in time of severe frost) will often penetrate down to the tile, and if the broken piece cover any aperture be not of considerable size and weight, and firmly placed, they force it aside or scraping the earth away loosen it, so as to make entry themselves into the drain, or force earth nto it sufficient to obstruct it. Another important necessity is that such drains have no standing water in the bottom, in consequence of any slight mistake of level; but have a gentle decent throughout from the top, the tiles level to each other, joining closely, and the drain junctions carefully fitted. Few men by the piece can be entrusted with this.

Much attention and judgment is required in our various soils and subsoils to determine the best depths of drains and width betwixt them; also if a few reeds, broom, etc., be required above the tile to conduct the water in the soil to the tile joinings. It is only in the poorest and most plastic clays that such can be necessary. I have sometimes heard complaints of the drains in poor plastic clays not being efficient—not drawing to any distance; and not even draining the surface immediately above the drain. I have always answered such complaints by telling the farmer to blame himself for such—that was owing to the poverty of his land—that by high farming, working his land in seasonable dry weather, and enriching it by plenty of manure his drains would become effective: that plenty of rich organic manures would generate a sufficiency of red earthworms, and their boring render his land honeycombed like a piece of old sea timber.

To render clay land dark in color, light in weight, friable, crumbly—what we term *sterny*, in little particles like stars, so as not to bind in a dense hard body in drought with large surface cracks, nor its clods to melt down in winter into a sticky pulp—is the excellence of clay farming. This condition of clay soil can only be attained by the continued application of large quantities of organic manures, æration, exposure to the winter frost, and summer drought, with lenient cropping, and particularly by well-laid-down pasturage. This last gives a turfy character to the soil, the opposite of agglutinated; a sterny, slightly adhesive consistency, bound together by the grass rooting, and not melting into pulp under rain. Yard manures give a different crumbliness, but both are opposed to the plastic or gluey, both favorable to vegetable growth, and both render the plant more able to withstand the excess of rain or drought, or the throwing out by winter frost. It is rather a curious fact that vegetable matter in the soil, in the condition of peat, is much disposed to throw out the plant in frost, and does so, from the wet, spongy, peaty soil, by the crystallization of the water heaving up in honeycomb or basaltic fashion. It clasps the plant stem at the surface

ANCY IN PRINT

of the ground, and as it expands underneath, tears up the plant from its rooting.

Need I mention that as drains come to be made deeper, the attention is the more required to have the tiles well burned, free of twist, and without flaw, and to be carefully laid, with gradual fall—at least without stagnating water in any part, the place of any stoppage afterwards being, in deep drains, more difficult to be found and the stoppage removed? In all cases a free outfall must be got, not subject to be occasionally flooded, otherwise be pipes may get mudded up.

Fall Plowing.

So soon as the small grains are harvested, no time should be lost in putting the plow to work. The stubble should be turned under with a shallow furrow, that the grain shattered out on the ground may come up for fall feed for stock, and to rot the weeds and other trash that covered the surface; besides this, if again plowed in the spring, the plow can go below the old furrow and not turn up, but turn under still deeper the seeds of weeds. Some years since, we took a good lesson in this mode of plowing: we deeply fall-plowed some three acres intended for spring rape; this we again plowed the last of May The surface at the time was almost free of weeds and would have done well if it had been sown with rape; but we were bound for a good crop, and in went the plow up to the beam, but just reaching the bottom of the fall furrow. The result was the bringing to the surface all the seeds of the last year's crop of weeds and unrotted stubble. The rape was sown, and the result was a fine crop of weeds, which soon choked out the rape; but it has proved a valuable lesson both to us and to others.—*Illinois Farmer.*

Surface Application of Manure.

From the result of various trials, Professor Voelcker seems to lean to the opinion that the spreading of farmyard compost on the surface of the soil, for even a considerable period before it is plowed in, is by no means so injurious a practice as we have hitherto been led to suppose. He says, "that on all soils with a moderate proportion of clay, no fear need be entertained of valuable fertilizing substances becoming wasted, if the manure cannot be plowed in at once. Fresh, and even well-rotted dung contains very little free ammonia; and since active fermentation, and with it the farther evolution of free ammonia, is stopped by spreading out the manure on the field, valuable manuring matters cannot escape into the air by adopting this plan." If this a reasonable conclusion, it goes far to remove our dread of losing, on such soils, the better portions of farmyard manure by top-dressings. As the season will soon be here when these dressings are commonly applied to grass, it will be useful to remember this fact.

The best time for applying the manure is held by the great Cheshire grass farmers, to be in the end of September or the beginning of October, particularly in a showery period, as the grass soon covers it, and renders it less liable to be damaged by the sun or drying winds.—*Mark Lane Express.*

Sugar Cane.--Culture and Selection.

We have three different kinds of cane here, at this time. First, the original Sorghum, that was first imported into the country, and two varieties of Imphee, the red and the black headed The black headed came from your office while in Dubuque. I generally manage to plant my cane about the first of May, Sorghum especially; Imphee might be planted later. I have tried separately the plan of soaking and sprouting seed before planting, with the following results. If the ground is moist and mellow, so as to keep the young sprouts growing, it is an advantage. If dry, as ground is apt to be after being plowed a few days, the young sprouts will die and prove a failure. I generally prefer planting dry seed in newly prepared ground. The young cane requires to be kept clean by hoeing and plowing. If the ground has been plowed deeply, and planted early, good cane can be had from our poorest soils. By manuring our soil, I am satisfied that cane will mature some two weeks earlier, and at the same time without diminishing the saccharine qualities of the juice. I know this is contrary to the experience of some of your correspondents; but I am satisfied, with my experience, that such is the case.

The question then arises, what is the best kind of cane to raise? My answer to that query is, Sorghum. I have tried Sorghum for five years in this State. The black headed Imphee, two; the red, one. The black headed seed I procured of you, at Dubuque. If it is worked up while the seed is in the milk, a very good article of sirup may be made, but in less quantity from the same number of gallons of juice than from Sorghum. I also found it to be less juicy, and much harder to crush than Sorghum, owing

PAGINATION INCO

that many good farmers are adopting it. The great point is to get the grass covered completely. In some parts of England a heavy roller, much resembling a wheel, and not more than an inch wide at the point, is used to run along the furrows after the plow and press in the grass. We once saw it in use on Mr. William Bennett's celebrated farm in Bedfordshire, and he assured us that on his very light sandy soil it was of the greatest value, not only for pressing in the grass but also for consolidating the land—it being well known that the great difficulty in growing wheat on such light land is to get it firm enough.

Where there is danger of smut, seed wheat, should always be "pickled." The spores of the smut adhere to the grain, and when this is sown they are taken into the circulation of the wheat plant and affect the grain at the harvest. To prevent this, we must adopt some method of killing the spores of the smut, or more properly "bunt."

The method most commonly adopted is as follows: Let a tub or half barrel be placed to receive a quantity of chamber-lye, two or three weeks before it is needed, and as soon as the ammonia is perceived pretty strong it is ready for use. If so strong that it smarts the eye, it should be diluted with water. This is better than to use it fresh. Let two baskets be provided. Pour the wheat into one basket from the sack, and dip the basketful of wheat into the tub of lye as far down as completely to cover the wheat. After remaining in the liquid for a few seconds, lift up the basket, let the surplus liquid run out of it, and then place it upon a drainer on an empty tub to drip still more liquid, till the empty basket is filled with wheat and dipped in the tub. Now empty the first basket on to a clean floor; and as every basketful is emptied, riddle a little slaked lime on to the wheat. Let the heap be repeatedly turned over till every kernel is coated with lime.

The philosophy of the operation is this: The spores of the smut contain oil, and the ammonia of the lye unites with this oil and destroys the spores. The lime dries the wheat and also assists in killing the spores.

Many other substances will kill the spores and thus prevent injury from smut. The best of these is blue vitriol (sulphate of copper.) For each bushel of wheat dissolve three or four ounces of vitriol in a quart of hot water, and when cool sprinkle the wheat with it, turning the wheat over on the floor till every grain is moistened with the vitriol. Lime must not be used in this case, as it neutralizes the vitriol.

Every farmer knows how to sow wheat after some fashion, but comparatively few know how to sow properly. The great error in sowing is to let the hand fall as soon as it leaves the bag containing the seed. Instead of this, the hand should be thrown back on a level with the elbow, and if a little higher it will be all the better. Do not throw the seed too high. The hand should not be raised higher than at the starting point. Stephens, in his Book of the Farm, has the following remarks on the subject:

"The most convenient form of sowing wheat is that of the semi-spheriod, made of linen sheeting, having an opening large enough along one side of its mouth to allow the head and right arm of a man to pass through, and the portion passed under rests upon his left shoulder. On distending its mouth with both hands, and on receiving the seed into it, the superfluous portion of the sheet is wound tight over the left arm, and gathered under it into the left hand; by which it is firmly held, while the load of grain is thus securely supported by that part of the sheet which passes over the left shoulder across the back, and under the right arm. The right arm, which throws the seed, finds easy access to the grain from the open side of the mouth of the sheet, between the left hand and the breast of the sower. A square sheet, knotted together in three of its corners, and put on in a similar manner, is sometimes used as a sowing-sheet; but one formed and sewed of the proper shape, and kept for the purpose, is a much more convenient article. Linen sheeting makes an excellent material for a sowing sheet, and, when washed at the end of the season, will last many years. The difficult point is to make the sowing-sheet fit the sower on the top of the left shoulder, where the greater part of the weight of the corn rests; and, in attempting this, the principal thing to be considered is, to make the strap, which goes over the shoulder, broad enough, and take the slope of the top of the shoulder, from the neck downwards. The gatherings of the cloth on each side of the shoulder-top should be as neatly executed as is a shirt, and a couple of tapes should be drawn through a slot-hem, to be tied tight in front of the sheet across the breast.

"In sowing, the sower walks on the third and fourth furrow-slices from the open furrow, which he keeps on his right hand. Taking as much

INCORRECT

seed as he can grasp in his right hand, he stretches his arm out and a little back, with the clenched fingers looking forward, and the left foot making an advance of a moderate step. When the arm has attained its most backward position the seed is begun to be cast, with a quick and forcible thrust of the hand forward. At the first instant of the forward motion, the fore-finger and thumb are a little relaxed, by which some of the seeds drop upon the furrow-brow and in the open-furrow; and while still further relaxing the fingers gradually, the back of the hand is also turned upward, until the arm becomes stretched before the sower, by which time the fingers are all thrown open, with the back of the spread hand uppermost. The motion of the arm being always in full swing, the grain, as it leaves the hand, and partaking of its momentum, receives such an impetus as to be projected forward in the form of a figure corresponding to the sweep made by the hand.—The forward motion of the hand is accompanied by a corresponding forward advance of the right foot, which is planted on the ground the moment the hand casts forward the bulk of the seed."

High casting is a common error with young sowers. The hand should be kept low, the arm stretched out, and the seed made to fly off in a curve in front, by a sharp turn up of the hand, and a free opening of the fingers near the end of that action, the nearest parts of the seed falling within two paces of the sower.

In regard to the quantity of seed per acre, we think two bushels or two bushels and a half none too much. Thin seeding, other things being equal, is apt to make the crop later.—*Genesee Farmer.*

Bog and Peat Meadows.

Now is the time to burn and to seed down bog meadows that have been properly ditched and prepared. The surface matter should all be burned, and the ashes well spread. These will be a sufficient manure for the grass seed, and will give a number of harvests of hay.—When the hay fails, turn over the surface again and burn and sow as before.

It must be kept in mind that the first step to be taken in all bog meadows is to drain them thoroughly. The ditches may be dug four rods asunder—three or four feet wide and three feet deep. Thorough draining is essential if you would have good English hay.

On our farm in Framingham we have converted many acres, bearing poor meadow grass, to good English mowing. When gravel knolls are near, the labor of covering an acre, and killing all the wild growth is not great.

The meadow must not be mowed before covering it with gravel, for we choose to bury the wild grass so completely that it will die and rot. This wild grass helps to fill up where the surface is uneven, and the new growth of English will be much purer than when the wild grass is cut and taken off.

The land of course must be first ditched and drained. Compost manure is required the first year to support the English grass. Then a small dressing once in two years will be enough to enable the English grass to keep the wild from reappearing.—*Mass. Ploughman.*

Manuring Plants through their Leaves.

The farmers of Long Island who use great quantities of fish for manure, have discovered that the most effective method of applying this kind of manure is to spread it upon the surface of the ground; if the fish are covered up they do very little good. This fact would be quite inexplicable if plants derived their food wholly through their roots; but this is not the case.

Numerous and careful experiments made many years ago have demonstrated that a large portion of the solid substances of plants enters in the form of invisible gases through the pores of the leaves. After plants are deprived of the water which they contain, just about one-half of the solid portion remaining is carbon, and the whole, or nearly the whole, of this enters the plants through the leaves.

Carbon passes into the leaves of plants combined with oxygen in the form of carbonic acid which at ordinary temperatures and under the pressure of the atmosphere is an invisible gas. In the leaf, under the action of the sun's rays, the carbonic acid is decomposed, the oxygen returning directly to the atmosphere, and the carbon being carried by the sap to build up the trunks, stems and roots of the plant.

If the plant is heated to a temperature of about 1,000 deg. in contact with the atmosphere, the carbon again combines with the oxygen of the atmosphere, and goes away in the invisible form of carbonic acid gas. But if the plant is covered with sods, or placed in a close oven and heated, the more volatile portions are driven away, and the carbon remains in the form of charcoal.

PAGINATION INCO

reciprocation of this trade, by the acceptance of European merchandize in exchange, we might anticipate a still further large extension of our foreign trade in vegetable and animal food. Unfortunately, however, we are drifting into a tariff policy that must prove seriously detrimental to our agricultural interest. If we exclude European goods from our markets, Europe must cease to buy our agricultural products. The laws of trade forbid the export of specie to pay for our produce, when the same products can be procured elsewhere in payment for goods. The same policy that limits our imports of British and French merchandize, necessarily lessens our exports of breadstuffs and provisions to those countries. Thus the protection so much clamored for by the Eastern and Middle States, is the bane and obstacle to the progress of the West. If New England and Pennsylvania are to have their manufactures forced by a hot-bed system of protection, the West must assent to have its splendid agricultural resources half developed. Instead of commanding the food markets of the world, the mission of the West must be limited to supplying the comparatively narrow wants of our domestic population. When we might supply the deficiencies of another densely populated hemisphere, we are to be confined, by our present tariff policy, to the limited markets of our own. This, to say the best of it, is a blindfold economy. It is neglecting the whole garden to foster the hot-beds; and that when the product of the hot-beds is, at best, but a dear and second-rate thing. The West must not tolerate this.

Our present national difficulties are being used as a stalking-horse for making advanced strides in this ultra-protective policy. It is said, "we must have money to carry on the war, and a high tariff will raise it." We should assent to this argument most readily, were it, in the first place, certain that more revenue will be raised by a high duty on small imports, than would be collected from moderate duties on liberal imports; and were it, in the next place, sure that the present high duties would be strictly regarded as a strictly temporary expedient, to be dispensed with so soon as the financial pressure ceases. But both of these points are extremely doubtful; and it therefore behoves the West to be vigilant after its interests. Neither the West itself, nor any part of the country, can afford to have our agricultural interests trifled with. The present manufacturing policy of the country is in deadly hostility to our farming industry, and, in so far, is in blind hostility to domestic manufactures also. It will be one of the very worst results of the war, if it should issue in the permanent adoption of a tariff that will shut up within itself this country, so manifestly made for reciprocating commerce with the whole world.—*U. S. Economist.*

Chloride of Lime.

The smell of chloride of lime is particularly offensive to many kinds of animals, especially to the common fly, the gad-fly, and stinging flies of all descriptions, so obnoxious in stable. A sure means to get rid of these troublesome visitors is to place a vessel filled with chloride of lime upon a shelf, or a board suspended to the ceiling. This being done in the evening, and a window left partly open as an outlet for the flies, none, or very few, will be found in the room in the morning. The smell of chloride is by no means injurious to man or beast; on the contrary it is wholesome as an absorbent of deleterious miasms pervading the air. It need hardly be recommended to repeat the expedient at short intervals, say at least once a week, the more so as it will cost but a trifle and will give no trouble.

In a room—kitchen, pantry or cellar—where chloride of lime is kept, mice and rats will keep off, as indeed they will from any place where the article is used. We have seen the experiment tried very successfully in a large Inn at Nuremberg, long infested with rats and mice, all of which disappeared almost suddenly, not only from the house and outer buildings, but also from the stables and yard.

The use of chloride of lime is not less efficacious for preserving plants from ants, caterpillars and other insects. We have a cabbage field cleared of this nuisance by the simple process of sprinkling the plants with a solution of chloride and water; which may be done by using a common hand broom or a paint brush. To our certain knowledge, a piece of ground sown with white cabbage was thus thoroughly preserved from insects, while in the neighboring pieces the plants were actually destroyed by them.

The same remedy is also applicable to fruit trees which may be preserved or purged from caterpillars, etc., by mixing a pound of chloride of lime with half a pound of lard; this will form a kind of paste which should be wrapped in tar, and tied to the stem or to the thicker branches of the tree. All insects will drop off

INCORRECT

almost instantaneously, nor will any be tempted to crawl up again. Even sparrows will keep away if the leaves have been sprinkled as aforesaid.

Experiments are being made as to the efficacy of chloride of lime compared with sulphur as a remedy for the vine disease, and the destruction of the aphis or vine-fretter.—*Deutscher Telegraph.*

A Quaker Girl's Talk.

Friend Harris—I have not taken my pen to write an essay; but just to have a little friendly talk, with the presumption to suppose thou wilt accept my spontaneous thoughts just as they come.

I should like to know how the men's work is to be done, if they all go to the army? Now, girls, what a pity it is that we did not take lessons in plowing years ago. Oh, that we were strong and wise enough to put in the crops this fall, instead of having our gray-headed fathers put their hands to the plow, which perhaps they had given up to our brothers for several years.

Oh, kind editor, forgive these tears, which fall and blot the page, for my brother, my noble Charlie, is now a soldier-boy; and while I am writing these lines, our dear old father is taking his place at the plow; but I presume he turns not a furrow without thinking of his son, whom, if need be, he is ready to sacrifice on the altar of freedom.

"Come, come!" says one; "Quakerism and war talk are rather inconsistent." Well, I can't help that; its a wonderful pass things have come to. I love the spirit of the angel of Peace. I have endeavored to preach and practice it; but, like Patrick Henry, I am ready to exclaim: "Give me liberty, or give me death!"

And now, dear girls, while our noble brothers are on their weary marches, or braving the dangers of the battle-field, cannot we be raising food for them to eat? Let all of us who are going to learn to plow this fall, send word to friend Harris; we will see how many names he gets; I know he will give us words of cheer! and he will welcome from us a few lines for the Farmer.

Some one says: "Never mind agricultural papers or fairs, these times." Ah, how mistaken! If we go not forward with the march of improvement, we will be incapable of appreciating peace, when it is again restored.

Another says: "Never mind the schools, or teachers' meetings." May God save us from such negligence, and give us strength to labor with undying zeal to educate the children, that they may shed an influence of good over the returning soldiers, and become noble citizens of a once more prosperous republic. Thine for the right. Sallie Bonsall, Salem, 8th mo., 1862.

Wheat at Toledo.

Never in the history of the Northwest has the quantity of wheat in the hands of producers been as great as at present. In every direction parties are complaining of the lack of facilities furnished by the railroads for bringing forward the grain, while the supply of canal boats is altogether inadequate to the demand. We saw a letter to the buisiness house in this city, a day or two ago, in which the writer stated that not only on the line of the Logansport, Peoria & Burlington, but along the Wabash road and canal, the grain houses were full to overflowing, and the quantity pressed upon the market rapidly increasing. That this is true is shown by the heavy grain receipts at this point for the past few weeks—much larger than for the same time in any previous year—and that, too, without apparently diminishing the amout to come forward, so rapidly is the grain received at all points along the canal and railroads. With a brisk foreign demand, our producers cannot hope to get rid of a tithe of the grain they now have on hand; but the home demand will be much larger than during the past few years. We have, however, no doubt that under all circumstances there will be an abundance for home consumption, and enough to supply the foreign demand—while prices can hardly fail of being remunerative. What a country! A few States producing breadstuffs sufficient for the world, and then have full granaries.—*Blade.*

Hand-Mowing Machine.—The object of this invention, patented by L. M. Doudna, of Amherst, N. H., is to obtain a simple and efficient mowing machine, to be operated by hand; one that can be operated or shoved along by a single person with facility, and perform good work. The invention is more especially designed for mowing lawns and meadows containing trees, around which an ordinary mowing machine, drawn by a team, could not be made to operate to advantage. The invention consists in mounting an ordinary hand frame on wheels, the axis of which is provided with a serpentine cam; said cam, as the machine is shoved along, ope-

off smooth and clean before planting again.—Not so with plants in the fall; for the roots of the strawberry continue to grow from the extreme end until cold weather sets in, and when carefully taken up before this, the ends are not broken, and if soon planted again they immediately grow.

Choice of Plants.—Young runners that are well rooted are always the best, and old plants should never be used, if it can be avoided.—When a variety is very scarce and valuable, the old plants may be taken up and pulled to pieces, roots and tops trimmed, and then planted.

Planting.—Choose cloudy weather for planting, if possible. Draw a line where you are to put the rows of plants, keeping it a few inches above the ground, so that you may plant under the line; this is much better than to let the line lie on the ground, for then it will be in the way of the transplanting trowel; spread out the roots evenly and on every side; cover them as deeply as you can without covering the crown of the plants; press the soil down firmly around them with the hands.

If the weather should prove dry, give them a good soaking with pure water (no mere sprinkling will do,) as often as they require it, which will be as often as the foliage droops. The rows should be two and a half feet apart, and the plants one foot apart in the rows. When pistillate varieties are used for the main crop, then every fifth row must be planted with a hermaphrodite variety, for the purpose of fertilizing the pistillates. Pistillate varieties will not bear alone, nor will they bear a full crop or perfect berries unless abundant supplies of perfect flowering varieties are placed in close proximity. Let no weeds grow among them, and stir the surface of the soil as often as possible; the oftener the better. We know that some cultivators assert that there is much injury done to the roots by frequent hoeing; but we have never found the plants as much injured by hoeing or forking among them as they were by neglecting to do either. Take off all runners as they appear, so that all the strength of the plant shall be concentrated, and not distributed among several, as a dozen small plants will not produce so much or so fine fruit as one good strong one. When plants are wanted, make a separate plantation for that purpose.

At the approach of winter, the entire surface of the soil, plants and all, should be covered with straw, hay, or some similar material, to the depth of one inch; the object being not so much for the purpose of keeping out the frost as to prevent the frequent freezing and thawing during the early part of winter and the approach of spring. As soon as the plants start in the spring, the covering should be pushed aside, so as to allow the plant to grow up through it. The question is often asked, whether it is necessary to cover the hardy varieties in this locality during winter? and if we should judge from the difference in the appearance of the plants in the spring, we might doubt the expediency of such a practice; but I have found it highly beneficial to cover all varieties, having tried several experiments the results of which were that on an average we obtained about one-quarter more fruit, when the plants were covered than when they were not.

The embryo fruit buds are formed in the fall and are often injured during the winter and spring, and of course if there are but few fruit stems put forth, there is but little call on the plant to support them, and consequently the leaves have more food.

Usually the plants grow strong or weak in proportion to the quantity of fruit they bear. This would often lead cultivators to suppose, from the luxuriant growth of the plants, that covering was of no benefit, if not positively injurious.

Keep off all runners at all times, and pull up all weeds that come up through the mulching. No stirring of the soil is needed if a good depth of mulch is sustained. It will generally be necessary to add a small quantity of mulch every fall, depending, of course, upon the nature of the material used. Salt hay is a material that is much used near New York, and it is cheap, lasting, and easily applied; but straw, hay, carpenters' shavings, leaves, tan-bark, etc., are all good. Strawberry plantations that are kept well mulched, and freed from weeds and runners, will last for many years, depending, of course somewhat upon the variety planted and the nature of the soil.

On very dry or sandy soil it is well to mulch the ground very soon after the plants are set out, or so soon as they take root in the soil, as there is but little danger of being troubled by weeds the first season, and the mulch keeps the earth moist, a thing which it is very difficult to accomplish in any other way.—*Andrew S. Fuller.*

John Loughry, of Rockville, Adams Co., the most celebrated peach raiser in Southern Ohio, died on the 5th inst., at his residence in Ohio, twenty miles below Portsmouth, in his 77th

year. He was a native of Cumberland Co, Pa., removed to Franklintown, Ohio, in 1817; and resided at Rockville since 1831.

Synonyms of Strawberries.

We have witnessed the present season, quite a number of the old varieties of strawberries exhibited under new names. And it now appears that the Bartlett, which has been puffed as a new seedling, and as producing at the rate of 600 bushels to the acre, is in fact the Brighton Pine, or some one allied to it, and very unproductive. The Newport proves to be an old valueless variety; the Wyoming and a *new* Elton Seedling, have both proven to be the Hovey; the Germantown pistillate proves also to be the Hovey; and the Germantown staminate is the old Cushing; the Queen of America proves to be the Voorhis, and the Bunce is said to be Cutter's Seedling. Lennig's White, the Albion, White Pine-Apple, and White Albany, have all four proven identical, and the Strawberry Committee of the Brooklyn Horticultural Society, have just granted a $10 premium for "the best new seedling," which proves to be Longworth's Prolific; while the British Queen, which Mr. Knox has reccomended for field culture, is Rivers' Eliza. It is full time we should have a standard as to the qualities demanded for any new strawberry, and not multiply sour and insipid trash. It is also full time we should have experts on our strawberry committees, and thus prevent what occurred at the recent exhibition at the American Agriculturist's rooms, where in consequence of the awards being made for plates of berries *numbered and not named*, there were exhibited several plates where the same kind were duplicated, and ten misnomers—red berries for Bicton Pine, which is white; a conical crimson berry as British Queen; a very small red berry as the Elton; the Wilson under the name of Duchesse; the light Scarlet Iowa as the Le Baron, which is dark crimson; and 21 of the old varieties which were rejected from 5 to 15 years ago by the American Pomological Convention, and by other Horticultural Societies, were there exhumed once more. The Delice d'Automne is one of these which was exposed as a humbug in Europe, and by Mr. Meehan, Editor of the Gardner's Monthly, several years ago, it possessing no autumnal character whatever, and Madame Lonesse, Admiral Dundas, British Queen, Comte de Flandres, Exhibition, General Havelock, Athlete, La Perle, Ne plus ultra, Omar Pacha, Reine, Hortense, Scarlet Nonpareil, Sir Charles Napier, Sir Adair, Sir Harry, Trollope's Victoria same as Boyden's Mammoth, Duchesse de Brabant, Amazone, Schiller, Black Prince, Cole's Prolific, Fillabasket, all of foreign origin and long since *rejected*. have been brought forth again, for when selected berries are shown on plates, their unproductive character is concealed, and as they are not tasted when the number of plates and names decides the award, their qualities remain also unknown.

We have this year had the following old varieties, which have been rejected by the Pomological Convention, and elsewhere, brought up again at the exhibitions to swell the numbers.—Ohio Mammoth, Willey, Brighton Pine, Scott's Seedling, Golden Seeded, Monroe Scarlet, Jenny's Seedling, Genesee, Buist's Prize, Dundee, Moyamensing, Pensylvanica, Rival Hudson, Richardson's Cambridge, Swainstone, Bishop's Orange, Burr's Seedling, Burr's Columbus, Brook's Prolific, Charles' Favorite, Crimson Globe, Eberlein's Seedling, Harlaem's Orange, Hooper's Seedling, Lizzie Randolph, Marylandica, Methven Castle, Montrous Swainstone, Schneike's Pistillate, Jesse Read, etc.

Really we have now so many sweet, perfumed and high-flavored varieties, that it is quite time the era of sour trash and semi-barren plants should cease; and that the culture of such acid berries as to make one gag to swallow them without sugar, should pass away, and give place to their superiors, and then the people would be enabled to learn what truly delicious strawberries are.—*Wm. R. Prince, in Country Gentleman.*

Pruning Evergreens.—The lowest boughs of a tree or bush should be left longer than those above them, if only the fraction of an inch, and the rule holds good from bottom boughs to the topmost ones. If the boughs or branches in any part of the tree or brush are allowed to get longer than those below them, the longest will throw off the drops when it rains, and shade those from the sun; and when the sun and rain are kept from an evergreen bough it languishes and dies by inches.

Sale of 'Kentucky Chief.'—We understand that A. H. Brand, Esq., has sold his splendid stallion, Kentucky Chief, for the snug sum of $6,500 cash. Considering the condition of the country just now, this looks very well for the esteem in which the horse is held, and in more auspicious times there is no telling what he would have brought.—*Lex. Obs.*

As to the practicability of introducing these machines into our country, I have great doubts. From the best estimates I can make, the expense of plowing will be more than by ordinary methods. The constant wear of the machinery and wire ropes must be very expensive; the difficulty when the engines or ropes give way, as they undoubtedly will, must render it very doubtful, to say the least, as to their being introduced into practical use. The quantity of fuel and water to keep the engines in operation, is very large, and of course very expensive. It must, however, be had, and will add largely to the difficulties in the way of its introduction in our country at present. I had hoped to have seen a traction engine, with plows or other arrangements to do the work, but there was none present; and from information obtained from a leading implement maker, it appears not to have given satisfactory evidence of its being successful. It is certainly very desirable to secure the application of steam successfully to aid in the cultivation of the farm, and in the onward march of improvement in machinery, I trust we shall yet be favored with the right machinery to accomplish the work—the machinery so simple in its arrangements as to be managed by ordinary laborers, thus avoiding the expense of engineers, who now have to be employed.

After the plowing was disposed of, the trial of mowers was had. Reapers could not be tried, as the grain was not ripe, and would not be under two weeks.

There were from ten to twelve mowers, I think, on the field, but all of them were not tried; they were all, I believe, of American origin, and several were made in America—Osborn & Kirby's, Wood's, Tremain's, the Buckeye, I believe, were all made there; the others were made here, some with modifications of the original machine, some with improvements valuable, and others quite doubtful. There were no arrangements to test the draft of the machines, or the amount of land which could be cut in a given time in the ordinary work in the field. The grass was quite light, though quite thick at the bottom, and required the knives to be properly arranged so as to prevent clogging—a neglect to do this, in some cases, very much marred the work of some of the new machines, especially one or two from our country. The machines were put in operation, each one managing as he thought best, the judges following the machine around the land two or three times, ascertaining how it did its work; and this, so far as I could judge, was all the means used to ascertain the qualities of the machine for actual farm work. This was surely not such a test as would settle any question as to the value of a machine. It was apparent in the trial, that with a good pair of trained horses, used to the work, with a driver equally well trained, the work was altogether better performed than where a strange span of horses and driver were used. Several of the machines performed their work, I thought, very well indeed, and some of them with very light draft, and in others the draft was apparently quite heavy. Wood's small mower, and Burgess & Key's mower, (the Allen mower, I believe, improved by them,) performed the work, I think, most satisfactorily, though some of the others did very well. The judges had not made their report when I left the show grounds this afternoon, and I cannot give the award, but presume that the prize, only one being offered, will be given to Wood's small mower, [which was done,] to which it was awarded by the Royal Society at Leeds last year. It is a very good machine, and works well in grass adapted to its use.

The Steam Wagons of the Western Prairies.

I noticed, some time since, an article in your paper in regard to J. A. Reed's Prairie Motor, in which it was stated that it would run from Omaha to Denver City. I also observed, a few weeks ago, a letter from some party in Iowa, to the Scientific American, in regard to the impracticability of the route from Omaha City westward for a machine of such size and weight.

Gen. Brown, proprietor of the "steam wagon," arrived here a week or two since, and having obtained all the information in regard to to the various routes which could be derived from parties who have been freighting across the plains for several years, he finally determined to run the motor from this point, and it was accordingly landed here. In getting from the levee up into town, they took a circuitous route over a new and rough road, to avoid a bridge, which, it was feared, would not bear the weight of the machine, and ran over a road which would have been impassable for one of the usual-sized Government freight wagons, with six yoke of cattle attached. The steam wagon moved over the road with ease and safety, to the great surprise of two or three hundred of our citizens who witnessed its performance, and

many of whom had predicted that it would not work at all.

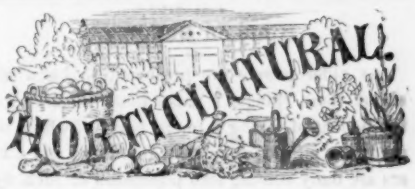
Gen. Brown and his associates, Messrs. Slote and Osborn, were here several days making their preparation for starting across the plains, and, in the meantime, making several trial trips for the purpose of testing the power and utility of their machine, all of which were entirely satisfactory. On one occasion they took out quite a long train of wagons, carrying not less than one hundred persons, and with this load they moved with ease over a grade of 500 feet per mile. On Tuesday of last week they completed their arrangements and started westward, with about ten tons of freight; but, unfortunately, after they had gone about twelve miles, having passed safely over all the rough road and got on to the high divide which runs from this point through to new Fort Kearney, they broke a shaft and were unable to proceed farther until they could procure a new one. This accident will detain them here for some time yet. Gen. Brown has returned to New York to obtain the necessary machinery, which he will forward immediately. The balance of his party are here yet, and will go ahead as soon as they make the necessary repairs.

Mr. Brown assured the Board of Trade, of this city, that he will have two more motors built and placed on the line from here to Denver by the time the freighting season opens next year; in consideration of which assurance, and the great benefit that it will be to our place, the Board of Trade have agreed to make all necessary repairs on the road as far as New Fort Kearney, so that the grade at no point shall exceed 400 feet per mile.

Fort Kearney is precisely 168 miles from this place, in a line due west, and the road follows the high level divide between the waters of the Platte and Nemaha and Blue rivers, A better natural road I am satisfied cannot be found, and with a little grading at a few places, within ten or twelve miles of this place, it will be as level as some of our western railroads.

Our citizens are quite jubilant over the passage of the Pacific Railroad Bill, in its present form, as it almost insures this as the point from which it will start westward.

I observed recently a paragraph in several eastern papers, stating that a "conflagration had again visited our city, and that the principal business portion was entirely destroyed." This is a mistake—there has been no fire in our city for the last two years.—A. J. H. Nebraska City, August 2, 1862, *in Scientific American.*



Strawberry Culture.

Time to Plant.—Although the strawberry may be planted with safety at any time from early spring until fall, yet there seems to be two seasons of the year in which it may be done more successfully than any other, namely April and May in spring, September and October in the autumn. August is sometimes chosen, but it is usually a dry month, and the heat being so great, the plants are more liable to die or be very much injured. Besides, the young plants are not so well rooted as they are when allowed to remain until September. I have always had better success by transplanting in September than earlier in the season, unless it be in the spring.

There is but little choice between April and September, except it be that plants carefully planted in autumn will give a fair crop the next season, while those planted in spring will bear scarcely any fruit until the following year.—Some cultivators make a practice of planting in September and taking a crop from the plants the following season, and then plow the plants under and plant again. To have this plan work successfully, it is only necessary to have the ground very rich, so that the plants will become very strong by the time they come into fruit.

Preparation of Plants.—When transplanted in the spring, the half dead leaves should be pulled off and the roots shortened one-third or one-half their length. This shortening induces them to throw out a new set of fibrous roots from the ends cut off, which they would not do otherwise. It also causes other roots to push from near the crown of the plant.

The shortening of the roots is beneficial to plants that are set out in the spring, no matter whether they have been a long time out of the ground, or have been taken up but recently, as the roots have become ripened during the winter, and the ends are always broken off in taking up, and it is necessary that they should be cut

PAGINATION INCORR

rating or vibrating a bar, having a segment cutter at its outer end, and which works over a segment cutter plate.—*Scientific Amer.*

Hints on Building.

As older people are presumed to know all about these things, I make these remarks for the benefit of young farmers, many of whom already have farms with poor buildings, and others are daily coming into possession of such, by inheritance or otherwise. If every farmer who builds a house had a little knowledge of architecture, it would save thousands of miles of unnecessary travel for the housewife, and many useless regrets in after years.

In the first place, do not build until you are able to build a *good* house; by which I do not mean an expensive, fancy house—for such is sadly out of place on a farm—but a neat, tasty and substantial one. Many a man has mortgaged his farm to build a large, fine house, to eclipse his neighbor, and had the sheriff sell house, farm and all to pay his debts. In planning your house. keep this old saw in view: "A little house well filled," &c., and then plan your house according to your needs, as a great deal of spare room in a farm house is so much wasted. Before resolving to build, get some trusty house-builder to make an estimate of the cost of a house such as you require; then add as much more to it, and if your pile of money corresponds with that, go ahead.

In planning a house, convenience should be the ruling idea, and such an arrangement of the rooms as will permit the doing the most work with the least travel. The saving of twenty-five or fifty cents a day amounts to a great deal in a life-time, and may add some years to the life of the house-keeper, and make her path through life much smoother. It is much the fashion, now-a-days, to build a large house, and then build a small place, off back out of sight of the highway, to live in. Now, then, as the kitchen, or living-room, is the one the family occupies three-fourths of the time, it should be situated in the pleasantest part of the house, if possible. As the parlor is seldom used, except when we have company to entertain, it matters but little where it is placed, if it does not interfere with the arrangement of the other rooms.

One thing beware of, viz: small bedrooms. All rooms used for sleeping apartments should be large and airy. For this reason, the chambers should be up square, and not low and sloping, as they are in all story and a half houses. It costs but little more to have the posts long enough to make the chambers square at the top, and the rooms are worth five times as much as the old-fashioned, low chambers.

The pantry should be large enough to keep flour, meal and such things in, instead of keeping them in some out building, or in the chambers, as most people used to do, thereby making a vast amount of unnecessary travel every time any of those articles are wanted for use.

The cellar should be proof against three things, viz: rats and mice, frost and water. In order to guard against the first and last, after the cellar is dug, and before the wall is started, dig a trench one foot deep, and the width of the wall directly under where the wall is to stand, and fill it with pounded stone, and on this commence the wall, which should be laid in mortar from the bottom. To guard against frost, leave a small space in the centre of the wall for three feet from the top, in which mortar is put, and have no stone reach through the wall in this three feet, and frost will not be very apt to get in.

The house should be located as near the well or spring as possible, or where the water can be brought near or into the house.

No man ought to build a house, without at the same time building a cistern. If he builds it at the same time he does the house, he is sure of it, and it will not cost as much as it would to make a separate job of it; and what is still worse, if he puts it off, it is very doubtful whether he ever has it. The best place for a cistern is in one corner of the cellar, as it requires no protection from frost, and no separate drain for the waste water, as it can go off in the cellar drain.

Especial attention should be given to the floors, in order to have them as smooth as possible, for the reason that most farm-house floors have to be mopped more or less, and every farmer's wife can tell how much easier a smooth floor mops than a rough one. Avoid all fancy moldings in finishing off, as every crease and crevice are receptacles for dust and dirt, and increase the labor of cleaning the wood-work.

Use none but seasoned lumber, and no poor material of any kind, as a good article is always the cheapest, and then employ good workmen; keep your house painted; and if no accident befalls it, you will never have to build another house, unless you should live longer than most mankind.—*Cor. N. E. Farmer.*

INCORRECT

The Western Grain Business.

[Anthony Trollope, of England, traveled last year in the United States, and has made a book about us, in which he tells, among other things, of what he saw concerning grain in the West.]

I was at Chicago and at Buffalo in October, 1861. I went down to the granaries, and climbed up into the elevators. I saw the wheat running in rivers from one vessel to another, and from railroad vans up into huge bins on the top stories of the warehouses; for these rivers of food run up hill as easily as they do down. I saw corn measured by the forty bushel measure with as much ease as we measure an ounce of cheese, and with greater rapidity. I ascertained that the work went on, week-day and Sunday, day and night incessantly; rivers of wheat and rivers of maize ever running. I saw men bathed in corn, as they distributed it in its flow. I saw bins by the score laden with wheat, in each of which bins there was space for a comfortable residence. I breathed the flour and drank the flour, and felt myself to be enveloped in a world of breadstuff. And then I believed, understood and brought it home to myself as a fact, that here in the corn lands of Michigan, and amid the bluffs of Wisconsin, and on the high table plains of Minnesota, and the prairies of Illinois had God prepared the food for the increasing millions of the Eastern World, as also for the coming millions of Western. I began to know what it was for a country to overflow with milk and honey, to burst with its fruits, and be smothered by its own riches. From St. Paul down the Mississippi—by the shores of Wisconsin and Iowa—by the ports on lake Pepin—by La Crosse, from which one railroad runs eastward—by Prairie du Chien, the terminus of a second—by Dunlieth, Fulton, and Rock Island, from which three other lines run eastward, all through that wonderful State of Illinois—the farmer's glory—along the ports of the great Lakes, through Michigan, Illinois, Ohio and further Pennsylvania, up to Buffalo, the great gate of the Western Ceres, the loud cry was this: "How shall we rid ourselves of our corn and wheat?" The result has been the passage of 60,000,000 bushels of breadstuffs through that gate in one year! Let those who are susceptible of statistics ponder that. For them who are not, I can only give this advice—let them go to Buffalo next October and look for themselves.

Fortune may favor fools; but that's a poor reason why you should make a fool of yourself.

Mechanical.

Steam Plows in England---American Mowing Machines.

[Hon. B. P. Johnson, of the New York Agricultural Society, on a visit to the London Exhibition, writes to the country Gentleman of a trial of Steam Plows and Mowing Machines at the show of the Yorkshire Agricultural Society.]

The steam plowing was first in order—only two of the machines being on the ground, Fowler's and Howard's. Fowler operates four plows and Howard three. So far as the plowing is concerned, it was well done by each; but which possesses the advantage of simplicity and expense, will be decided in the report of J. C. Morton, Esq., who has the matter in charge, and who is in every way competent for the business. Mr. Fowler's plows were operated by an eight-horse power engine—the engine and windlass being stationed on the headland, and opposite to them a self-acting anchor, between which the plow is pulled, by means of a wire rope, backwards and forwards, one end being alternately in the air and the other in the soil, thus avoiding the necessity of turning the headlands, which is a very good arrangement. The Messrs. Howard's machine was worked with an ordinary portable engine, with detached windlass, worked by a connecting rod, which seemed to be a good arrangement. It is a three-furrow plow, and from its simplicity, its motions are very easily controled by the man having it in charge. The machines, after the preliminary trials, were started for an hour's trial of speed. On the expiration of the time, it was found that Fowler's plow had plowed exactly an acre in an hour. Howard's, in the same space of time, with a ten-horse engine, had plowed fourteen chains twenty-three links, and fifty-three links in width. The work was well done, but each of the plows had their advocates.

At the close of the plowing, there was a trial between Mr. Fowler's machine, as a digger or scarifier, and a seven tine cultivator invented by him. They were worked with a fourteen horse-power engine of Messrs. Kitson & Hewitson, of Leeds, and which is constructed so that it may be adapted to the purpose of thrashing, and to most farming operations. The engine was a powerful one; its arrangement of the wire-ropes was preferable, in our opinion, to either of the others.

PAGINATION INCOR

As to the practicability of introducing these machines into our country, I have great doubts. From the best estimates I can make, the expense of plowing will be more than by ordinary methods. The constant wear of the machinery and wire ropes must be very expensive; the difficulty when the engines or ropes give way, as they undoubtedly will, must render it very doubtful, to say the least, as to their being introduced into practical use. The quantity of fuel and water to keep the engines in operation, is very large, and of course very expensive. It must, however, be had, and will add largely to the difficulties in the way of its introduction in our country at present. I had hoped to have seen a traction engine, with plows or other arrangements to do the work, but there was none present; and from information obtained from a leading implement maker, it appears not to have given satisfactory evidence of its being successful. It is certainly very desirable to secure the application of steam successfully to aid in the cultivation of the farm, and in the onward march of improvement in machinery, I trust we shall yet be favored with the right machinery to accomplish the work—the machinery so simple in its arrangements as to be managed by ordinary laborers, thus avoiding the expense of engineers, who now have to be employed.

After the plowing was disposed of, the trial of mowers was had. Reapers could not be tried, as the grain was not ripe, and would not be under two weeks.

There were from ten to twelve mowers, I think, on the field, but all of them were not tried; they were all, I believe, of American origin, and several were made in America—Osborn & Kirby's, Wood's, Tremain's, the Buckeye, I believe, were all made there; the others were made here, some with modifications of the original machine, some with improvements valuable, and others quite doubtful. There were no arrangements to test the draft of the machines, or the amount of land which could be cut in a given time in the ordinary work in the field. The grass was quite light, though quite thick at the bottom, and required the knives to be properly arranged so as to prevent clogging—a neglect to do this, in some cases, very much marred the work of some of the new machines, especially one or two from our country. The machines were put in operation, each one managing as he thought best, the judges following the machine around the land two or three times, ascertaining how it did its work; and this, so far as I could judge, was all the means used to ascertain the qualities of the machine for actual farm work. This was surely not such a test as would settle any question as to the value of a machine. It was apparent in the trial, that with a good pair of trained horses, used to the work, with a driver equally well trained, the work was altogether better performed than where a strange span of horses and driver were used. Several of the machines performed their work, I thought, very well indeed, and some of them with very light draft, and in others the draft was apparently quite heavy. Wood's small mower, and Burgess & Key's mower, (the Allen mower, I believe, improved by them,) performed the work, I think, most satisfactorily, though some of the others did very well. The judges had not made their report when I left the show grounds this afternoon, and I cannot give the award, but presume that the prize, only one being offered, will be given to Wood's small mower, [which was done,] to which it was awarded by the Royal Society at Leeds last year. It is a very good machine, and works well in grass adapted to its use.

The Steam Wagons of the Western Prairies.

I noticed, some time since, an article in your paper in regard to J. A. Reed's Prairie Motor, in which it was stated that it would run from Omaha to Denver City. I also observed, a few weeks ago, a letter from some party in Iowa, to the Scientific American, in regard to the impracticability of the route from Omaha City westward for a machine of such size and weight.

Gen. Brown, proprietor of the "steam wagon," arrived here a week or two since, and having obtained all the information in regard to to the various routes which could be derived from parties who have been freighting across the plains for several years, he finally determined to run the motor from this point, and it was accordingly landed here. In getting from the levee up into town, they took a circuitous route over a new and rough road, to avoid a bridge, which, it was feared, would not bear the weight of the machine, and ran over a road which would have been impassable for one of the usual-sized Government freight wagons, with six yoke of cattle attached. The steam wagon moved over the road with ease and safety, to the great surprise of two or three hundred of our citizens who witnessed its performance, and

INCORRECT

many of whom had predicted that it would not work at all.

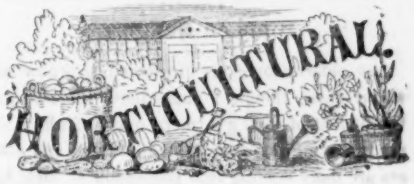
Gen. Brown and his associates, Messrs. Slote and Osborn, were here several days making their preparation for starting across the plains, and, in the meantime, making several trial trips for the purpose of testing the power and utility of their machine, all of which were entirely satisfactory. On one occasion they took out quite a long train of wagons, carrying not less than one hundred persons, and with this load they moved with ease over a grade of 500 feet per mile. On Tuesday of last week they completed their arrangements and started westward, with about ten tons of freight; but, unfortunately, after they had gone about twelve miles, having passed safely over all the rough road and got on to the high divide which runs from this point through to new Fort Kearney, they broke a shaft and were unable to proceed farther until they could procure a new one. This accident will detain them here for some time yet. Gen. Brown has returned to New York to obtain the necessary machinery, which he will forward immediately. The balance of his party are here yet, and will go ahead as soon as they make the necessary repairs.

Mr. Brown assured the Board of Trade, of this city, that he will have two more motors built and placed on the line from here to Denver by the time the freighting season opens next year; in consideration of which assurance, and the great benefit that it will be to our place, the Board of Trade have agreed to make all necessary repairs on the road as far as New Fort Kearney, so that the grade at no point shall exceed 400 feet per mile.

Fort Kearney is precisely 168 miles from this place, in a line due west, and the road follows the high level divide between the waters of the Platte and Nemaha and Blue rivers, A better natural road I am satisfied cannot be found, and with a little grading at a few places, within ten or twelve miles of this place, it will be as level as some of our western railroads.

Our citizens are quite jubilant over the passage of the Pacific Railroad Bill, in its present form, as it almost insures this as the point from which it will start westward.

I observed recently a paragraph in several eastern papers, stating that a "conflagration had again visited our city, and that the principal business portion was entirely destroyed." This is a mistake—there has been no fire in our city for the last two years.—A. J. H. Nebraska City, August 2, 1862, *in Scientific American.*



Strawberry Culture.

Time to Plant.—Although the strawberry may be planted with safety at any time from early spring until fall, yet there seems to be two seasons of the year in which it may be done more successfully than any other, namely April and May in spring, September and October in the autumn. August is sometimes chosen, but it is usually a dry month, and the heat being so great, the plants are more liable to die or be very much injured. Besides, the young plants are not so well rooted as they are when allowed to remain until September. I have always had better success by transplanting in September than earlier in the season, unless it be in the spring.

There is but little choice between April and September, except it be that plants carefully planted in autumn will give a fair crop the next season, while those planted in spring will bear scarcely any fruit until the following year.—Some cultivators make a practice of planting in September and taking a crop from the plants the following season, and then plow the plants under and plant again. To have this plan work successfully, it is only necessary to have the ground very rich, so that the plants will become very strong by the time they come into fruit.

Preparation of Plants.—When transplanted in the spring, the half dead leaves should be pulled off and the roots shortened one-third or one-half their length. This shortening induces them to throw out a new set of fibrous roots from the ends cut off, which they would not do otherwise. It also causes other roots to push from near the crown of the plant.

The shortening of the roots is beneficial to plants that are set out in the spring, no matter whether they have been a long time out of the ground, or have been taken up but recently, as the roots have become ripened during the winter, and the ends are always broken off in taking up, and it is necessary that they should be cut

PAGINATION INCO

rating or vibrating a bar, having a segment cutter at its outer end, and which works over a segment cutter plate.—*Scientific Amer.*

Hints on Building.

As older people are presumed to know all about these things, I make these remarks for the benefit of young farmers, many of whom already have farms with poor buildings, and others are daily coming into possession of such, by inheritance or otherwise. If every farmer who builds a house had a little knowledge of architecture, it would save thousands of miles of unnecessary travel for the housewife, and many useless regrets in after years.

In the first place, do not build until you are able to build a *good* house; by which I do not mean an expensive, fancy house—for such is sadly out of place on a farm—but a neat, tasty and substantial one. Many a man has mortgaged his farm to build a large, fine house, to eclipse his neighbor, and had the sheriff sell house, farm and all to pay his debts. In planning your house. keep this old saw in view: "A little house well filled," &c., and then plan your house according to your needs, as a great deal of spare room in a farm house is so much wasted. Before resolving to build, get some trusty house-builder to make an estimate of the cost of a house such as you require; then add as much more to it, and if your pile of money corresponds with that, go ahead.

In planning a house, convenience should be the ruling idea, and such an arrangement of the rooms as will permit the doing the most work with the least travel. The saving of twenty-five or fifty cents a day amounts to a great deal in a life-time, and may add some years to the life of the house-keeper, and make her path through life much smoother. It is much the fashion, now-a-days, to build a large house, and then build a small place, off back out of sight of the highway, to live in. Now, then, as the kitchen, or living-room, is the one the family occupies three-fourths of the time, it should be situated in the pleasantest part of the house, if possible. As the parlor is seldom used, except when we have company to entertain, it matters but little where it is placed, if it does not interfere with the arrangement of the other rooms.

One thing beware of, viz: small bedrooms. All rooms used for sleeping apartments should be large and airy. For this reason, the chambers should be up square, and not low and sloping, as they are in all story and a half houses. It costs but little more to have the posts long enough to make the chambers square at the top, and the rooms are worth five times as much as the old-fashioned, low chambers.

The pantry should be large enough to keep flour, meal and such things in, instead of keeping them in some out building, or in the chambers, as most people used to do, thereby making a vast amount of unnecessary travel every time any of those articles are wanted for use.

The cellar should be proof against three things, viz: rats and mice, frost and water. In order to guard against the first and last, after the cellar is dug, and before the wall is started, dig a trench one foot deep, and the width of the wall directly under where the wall is to stand, and fill it with pounded stone, and on this commence the wall, which should be laid in mortar from the bottom. To guard against frost, leave a small space in the centre of the wall for three feet from the top, in which mortar is put, and have no stone reach through the wall in this three feet, and frost will not be very apt to get in.

The house should be located as near the well or spring as possible, or where the water can be brought near or into the house.

No man ought to build a house, without at the same time building a cistern. If he builds it at the same time he does the house, he is sure of it, and it will not cost as much as it would to make a separate job of it; and what is still worse, if he puts it off, it is very doubtful whether he ever has it. The best place for a cistern is in one corner of the cellar, as it requires no protection from frost, and no separate drain for the waste water, as it can go off in the cellar drain.

Especial attention should be given to the floors, in order to have them as smooth as possible, for the reason that most farm-house floors have to be mopped more or less, and every farmer's wife can tell how much easier a smooth floor mops than a rough one. Avoid all fancy moldings in finishing off, as every crease and crevice are receptacles for dust and dirt, and increase the labor of cleaning the wood-work.

Use none but seasoned lumber, and no poor material of any kind, as a good article is always the cheapest, and then employ good workmen; keep your house painted; and if no accident befalls it, you will never have to build another house, unless you should live longer than most mankind.—*Cor. N. E. Farmer.*

ON INCORRECT

The Western Grain Business.

[Anthony Trollope, of England, traveled last year in the United States, and has made a book about us, in which he tells, among other things, of what he saw concerning grain in the West.]

I was at Chicago and at Buffalo in October, 1861. I went down to the granaries, and climbed up into the elevators. I saw the wheat running in rivers from one vessel to another, and from railroad vans up into huge bins on the top stories of the warehouses; for these rivers of food run up hill as easily as they do down. I saw corn measured by the forty bushel measure with as much ease as we measure an ounce of cheese, and with greater rapidity. I ascertained that the work went on, week-day and Sunday, day and night incessantly; rivers of wheat and rivers of maize ever running. I saw men bathed in corn, as they distributed it in its flow. I saw bins by the score laden with wheat, in each of which bins there was space for a comfortable residence. I breathed the flour and drank the flour, and felt myself to be enveloped in a world of breadstuff. And then I believed, understood and brought it home to myself as a fact, that here in the corn lands of Michigan, and amid the bluffs of Wisconsin, and on the high table plains of Minnesota, and the prairies of Illinois had God prepared the food for the increasing millions of the Eastern World, as also for the coming millions of Western. I began to know what it was for a country to overflow with milk and honey, to burst with its fruits, and be smothered by its own riches. From St. Paul down the Mississippi—by the shores of Wisconsin and Iowa—by the ports on lake Pepin—by La Crosse, from which one railroad runs eastward—by Prairie du Chien, the terminus of a second—by Dunlieth, Fulton, and Rock Island, from which three other lines run eastward, all through that wonderful State of Illinois—the farmer's glory—along the ports of the great Lakes, through Michigan, Illinois, Ohio and further Pennsylvania, up to Buffalo, the great gate of the Western Ceres, the loud cry was this: "How shall we rid ourselves of our corn and wheat?" The result has been the passage of 60,000,000 bushels of breadstuffs through that gate in one year! Let those who are susceptible of statistics ponder that. For them who are not, I can only give this advice—let them go to Buffalo next October and look for themselves.

Fortune may favor fools; but that's a poor reason why you should make a fool of yourself.

Mechanical.

Steam Plows in England---American Mowing Machines.

[Hon. B. P. Johnson, of the New York Agricultural Society, on a visit to the London Exhibition, writes to the country Gentleman of a trial of Steam Plows and Mowing Machines at the show of the Yorkshire Agricultural Society.]

The steam plowing was first in order—only two of the machines being on the ground, Fowler's and Howard's. Fowler operates four plows and Howard three. So far as the plowing is concerned, it was well done by each; but which possesses the advantage of simplicity and expense, will be decided in the report of J. C. Morton, Esq., who has the matter in charge, and who is in every way competent for the business. Mr. Fowler's plows were operated by an eight-horse power engine—the engine and windlass being stationed on the headland, and opposite to them a self-acting anchor, between which the plow is pulled, by means of a wire rope, backwards and forwards, one end being alternately in the air and the other in the soil, thus avoiding the necessity of turning the headlands, which is a very good arrangement. The Messrs. Howard's machine was worked with an ordinary portable engine, with detached windlass, worked by a connecting rod, which seemed to be a good arrangement. It is a three-furrow plow, and from its simplicity, its motions are very easily controled by the man having it in charge. The machines, after the preliminary trials, were started for an hour's trial of speed. On the expiration of the time, it was found that Fowler's plow had plowed exactly an acre in an hour. Howard's, in the same space of time, with a ten-horse engine, had plowed fourteen chains twenty-three links, and fifty-three links in width. The work was well done, but each of the plows had their advocates.

At the close of the plowing, there was a trial between Mr. Fowler's machine, as a digger or scarifier, and a seven tine cultivator invented by him. They were worked with a fourteen horse-power engine of Messrs. Kitson & Hewitson, of Leeds, and which is constructed so that it may be adapted to the purpose of thrashing, and to most farming operations. The engine was a powerful one; its arrangement of the wire-ropes was preferable, in our opinion, to either of the others.

PAGINATION INCO

S. D. HARRIS, EDITOR.

The Thirteenth Ohio State Fair.

The attempt to hold a Fair in Ohio this year was looked upon as a bold, not to say a rash undertaking; and as the season progressed, the discouragements augmented and intensified, until from all quarters came up the most dubious forebodings, and earnest counsel for postponement to a later date, or complete abandonment for this year. Men of less nerve and bottom than our State Board of Agriculture, would have bowed before the sweep of such untoward circumstances; but being men of a healthy and substantial organization, they never for a moment hesitated as to what they should do. Depending for success entirely upon THE PEOPLE, they pushed straight on towards the mark, and nailed their banner to the old flag-staff of the Industry of the State. The severest trial of all came the week before the fair, when our reserve proportion of stalwart men were called to defend the southern border. The alacrity and volume of that response was one of the sublimest results of this time of trial. The Squirrel Hunters were the life-blood of the State, and their magnificent demonstration settles at once, the final result of this war, for the region of the Mississippi Valley.

Then came the Fair: The weather was most beautiful; Monday brought in a few exhibiters with the word that the railroads were all occupied by the return soldiers, and goods could not be shipped to any great extent. Tuesday was a slight improvement in the way of travel and shipments, but the grounds looked vacant and the tables were unfurnished. Tuesday night filled the hotels, and Wednesday morning put a lively and pleasant looking crowd of fifteen thousand upon the fair grounds. The tables and stalls filled up respectably, and we saw that the star of success was in the ascendant. Thursday brought the avalanche, and thirty thousand people walked and talked and looked and rested and walked again, all through that beautiful day. The sun of Austerlitz was not more beautiful in the eyes of Napoleon, than was this sight to the members of the State Board, since it placed the pecuniary success of the exhibition, beyond all perndventure, with all of Friday for a spare margin, so that on Friday night the Treasurer had a surplus of several thousand dollars above the entire expenses of the fair.

THE FITTING UP OF THE GROUNDS,

was the work of Mr. Dewitt, the resident member, and in all our experience among State Fairs in these United States, we have never seen so complete, substantial and economical fixtures, for such purpose. The lumber was contracted for and sawed to order in the Canada pineries, from whence it was towed here in an immense raft; the fences and buildings are so constructed that the lumber can be taken down without damage, which, at the same time, they answer every purpose for protection in their place. We feel like awarding the grand gold medal of honor to Wm. Dewitt, as the prize Chief of Construction for the Ohio State Fair.

THE CATTLE DEPARTMENT.

Owing to the difficulty of shipping stock from the south, but few cattle could be brought from the short horn herds in that region. By dint of good generalship, McMillen, of Greene, got up his fine herds, and also Capt. Palmer of Fayette, and Mr. Coulter of Clinton. Mr. Rankin, of Madison, smuggled in his noble bull with McMillen's stock, and got through on time. Matthews, of Licking, also got up his famous Starlight.

HORSE DEPARTMENT.

In roadster stallions, 4 yrs. and over, 1st, Royal George, owned by Fields & Co., Buffalo, N. Y., 2d, Clinton, owned by E. A. Fuller, Columbus. Royal George is half brother to Toronto Chief, and other celebrated trotters; sired by old Royal George in Canada. He is very large for a fast trotter, being 16½ hands, and weighing over 1300 lbs. He is dark chestnut color, has a fine velvety coat, beautiful carriage and his general appearance gives unmistakable evidence of high breeding. Clinton was sired by Williams' Green Mountain Morgan; his dam is said to be nearly thorough-bred. He is a beautiful bay horse, a smooth and rapid trotter, and a first class sample of the Morgan and blood horse cross.

In addition to these superior animals, the brothers Ladd made a good display of their horse stock, as the list of awards will show,

INCORRECT

where Jas. D. Ladd takes five prizes and W. H. Ladd one, in the classes of roadsters, saddle and all purposes.

IN HORSES OF ALL WORK

In which class some twenty odd of the finest stallions in the State were shown. 1st premium to Flying Hiatoga, by D. B. Updegraff, Mt. Pleasant, Jefferson Co., O.; and we surely have never seen a horse so completely filling the requisitions of "all purposes."—While giving every evidence of high breeding, he is a large and powerful horse, 16 hands 2 inches in hight, and weighs 1365½ lbs. in condition. He walks *fast*, and has a slashing trot, and racks and paces faster than anything of the horse kind we have ever seen. He was shown in harness and under saddle, showing at all times the most remarkable docile and tractable disposition, changing his gaits at the word. In points he was remarkable, possessing the stoutest limbs, longest shoulder, stoutest back, powerful quarters and loin, with beautiful head, ear and style.

Mansfield, a three-year-old stallion colt of this horse, and his living picture, exhibited by the same gentleman, took the 1st premium in roadster class, they were broke only a week ago. Laura Kemble, of the same stock, took the sweepstakes prize of $100 as best mare of any breed, and well did she merit it. A more stylish, handsome goer we have not seen. Jennie, a beautiful Hiatoga mare, owned by Dr. J. T. Updegraff, took 1st premium for the saddle. Mr. D. B. Updegraff is also the exhibiter of the premium colts Triumph and Joe Allen, and of Rob Roy, a stout and beautiful three-year-old blood stallion, by imported Bonnie Scotland, and out of Bull Barton.

Thus, the practical breeder can, by candidly testing the merits of all breeds, surely be able to produce the best, and we congratulate Mr. Updegraff, on his successful competition, for success it is, notwithstanding he may not have received all the premiums he was entitled to.

A word in reference to the remarkable family of horses, Hiatogas; they are comparatively a new stock, but from what we see and learn of them, possess that individuality and merit which place them second to none; large, stylish, beautiful color, remarkable for early maturity, and they appear to be universal goers, (many of them very fast,) and especially valuable for the road and the saddle. The brothers Updegraff merit especial commendation, as well for the exhibition of horse stock, as for their fine personal display of horsemanship, in which line they are perfectly at home, especially in saddle, which is a rare accomplishment in these days.

SHEEP DEPARTMENT.

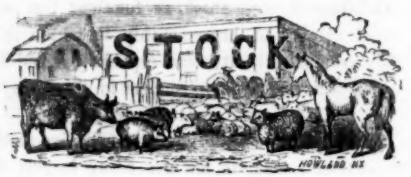
Sheep were best represented of the live stock department, Spanish merinos being largely in the majority as to numbers, while the long wools made up in dignity and effect what they lacked in quantity. A Spanish buck owned by Geo. Campbell, of Vt., and another by Thos. Gorby, of Randolph, O., were especially coveted by many sheep fanciers, and large prices, (we heard as high as $1,000 for one,) were offered for them, but their owners would not part with them. We have not space to give even a brief particular notice of all the good sheep on exhibition, and can only remark in general, that here was abundant evidence of the progress our farmers are making in exactly the right direction; these staunch bodied, heavy fleeced animals, both of fine and long wool, will make the best return all the time.

The Wool Show was creditable considering that prices have been so high as to tempt wool growers to dispose of all their clips, leaving but little wool to be spared for exhibition. Mr. Goodale made the most of the material at his command.

CASHMERE GOATS.

We have steadily watched the progress of the last few years in the breeding and diffusion of Cashmere Goats, which were first imported from Asia, by Dr. Davis, of South Carolina.—From thence they passed to Col. Peters, of Atlanta, Georgia, by whom they were very highly esteemed, and through whose enterprise they were sent to various places in the north. At a later date, Mr. Brown, of Constantinople, sent a lot of these animals to his cousin in Ross Co. O. From these various importations and the prolific nature of the animal, they are becoming a part of the staple live stock of the country and promise to be profitable. The yield of wool on the high bred animals is from three to five lbs. per head, which sells readily at about $8 per lb. The rapidity with which grades can be raised to fine bred, together with the hardiness and economy of keeping, make this a desirable addition to our farm stock; while their beauty, docility and unique appearance, secures for them a place in the lawn of the amatuer.

The principal breeder of cashmeres in Ohio at present, is Mr. S. S. Williams, of Granville, Licking Co., whose pens, at the three last an-



Driving Milch Cows.

Dairymen are every year astonished at the remarkable yield claimed for some dairies, reaching five or six hundred pounds of cheese and butter per cow, and even higher than this, the cows being fed on hay and grass alone. To prove the truth of these statements, we referred to the books of the merchant who has received the produce, and it is found all correct. Good cows, good feed, a careful dairyman, are the most obvious reasons that must unite in producing this result. They are at the command of any one who earnestly sets about it. Yet how difficult it is to attain these highest yields of the dairy! The truth is, many minor cases, appearing too trifling for notice, must operate together or fail.

Inquiring out one of these large reports, we found that the owners, the man and his wife, not only did their milking themselves, but they always brought and drove their own cows. Quietness in driving, especially when the udders are full, is of the utmost importance. A broken bar, and a swelled teat, are often the indications the owner gets of inconsiderate haste in driving cows. A wide gate, or taking out the bars entirely, is safer than to let them down at one end. A dairyman complains of the season as bad for the dairy, but his neighbors say the training of shepherd's dogs is worse than the season. Two boys and a dog are as unfit for driving cows as they would be to drive a mowing machine or a locomotive. We have seen a boy and a dog urge them to the bars, and another watch outside to give them a good scare and make them jump as they came through. Yet the good dairywoman did not know why her cheese was smaller the next day.—*Homestead.*

Good Sheep in Ashtabula Co.—J. Dodge, Esq., of New Lyme, one of the most successful farmers and stock growers, in answer to my inquiries, says "that his present flock of sheep—160, Cotswold stock—yielded an average of 5½ lbs. of nice, clean wool; that about seventy of the flock have raised thus far 100 lambs; that he, his son, and A. R. Beckwith, took a number last fall to Mr. Logan's, in Pennsylvania, who had an imported Leicester buck; that the 26 he took there had lambs, 23 of which had twins; that one of his yearling ewes yielded 10¾ lbs. of well-washed wool; and that three of his lambs, when seven weeks, weighed, one 67, one 70, and one 73 lbs." Have others of our farmers better lambs? If so, they are good ones.—*Joel Blakeslee, in Conneaut Reporter.*

Rearing and Fattening Hogs.

BREEDING AND REARING.

In selecting my breeding hogs, I always pick out the best shaped, most thriving boar pig to to keep over for a breeder. For a sow I select a healthy shoat, well shaped, but thin and lank, in preference to a fat and sleek one; my reasons for this are, that the lean sow will produce more pigs, and raise them better, than one high in order—the sleek one converts all her food into fat and flesh for her own sides and back, while in the lean one it is converted into food for the young. This rule is applicable to all animals. A cow which shows every rib when in milk, will bring forth larger and better calves, and give more and better milk, than the one which always looks fat enough for the slaughter. My experience fully sustains my theory. My mode of raising hogs which are intended to be kept over, is to have them pigged about the latter part of August or first of September, and after allowing them to run with the sow from four to six weeks, confine them in a separate pen.—When first taken from the sow they should be fed from six to eight times a day, or else they will fall off in flesh, and it will take them weeks to recruit. Their usual allowance, at first, should be about a pint of milk to each pig, and in order to facilitate the properly attending to them, the milk barrel should be kept standing very near the pen, from which it can be dipped with a pail with very little trouble, being replenished night and morning with fresh skimmed milk from the dairy. The quantity for each pig should be gradually increased each day according to the growth of the pigs, until they have attained to the age of three or four months, when a regular allowance should be made them; and the number of times feeding may be diminished. At this time in the pig's life a little grain fed night and morning, will not be thrown away on him; a little oats or rye if the pig is in a healthy condition, followed by about a pint of corn, which may be subsequently increased to a quart. This addition of grain will tell

amazingly in the growth of the animal, as well as have a tendency to keep him in such a condition, that when "fattening time" arrives he will be ready for the knife much sooner than a hog fed only on slops without the daily quota of corn, to say nothing of the saving of a good deal more corn than has been used up to this time in the feeding. The milk from the dairy, when weakened by the slops from the kitchen, should occasionally through the week be enriched by the addition of rye bran.

STY AND BEDDING.

There is no greater mistake made by farmers than allowing swine to run about out of the pen. To say nothing of the immense destruc- which they are liable to do, they so completely run themselves down that it takes almost double the amount of feeding to get them in condition for butchering.

The pen in which the hogs are kept should consist of two apartments—a covered and an uncovered one. An excellent manner in which to construct a pig-sty, is to erect a two-story frame building, having a part of the under story boarded off for a place in which to keep the slop barrel,reserving the rest for a dry pen for the hogs, and have a pen constructed outside, and communicating with this covered one. The feeding trough should be in the outside pen. In this manner, if the pigs are given a sufficiency of rye straw in the inside pen, and the outside one is kept well supplied with the buts of corn stalks, they will not only make an immense amount of manure, but will keep themselves white and clean, thus refuting the assertion of the filthiness which is continually flung at them. In the upper part of this pen should be kept litter for the bedding for the hogs; or a part of it may be partitioned off for a hennery.

I have adopted what I consider a very good, as well as economical plan of getting the upper part of my hog building filled with good littering material. It is this: When huauling in my corn fodder I cut off about two feet of the hard, dry buts, which the cattle cannot eat, and have bonnd into small bundles and stowed away in the upper portion of the hog-house, to be used as required. These corn buts when thrown into the outside pen are so torn and trampled up that they are converted into good, lasting manure, which has not its superior on the farm, and which would be almost entirely lost if fed to the cattle in the fields, etc.

FATTENING.

When fattening time comes, I generally commence by feeding the "nubbins," and after two or three weeks, follow them up with shelled corn. This I always feed boiled, boiling in the morning what is required during the day, and at night what is necessary for the morning.—Feeding thus, brings my work nearly all in daylight. In this way I can make my hogs fat enough for all practical purposes, by feeding them from fifteen to twenty bushels of corn, each, and in slaughtering at sixteen months old, they weigh from four to five hundred pounds. I never like them to exceed the latter figure in weight, for I have no fancy for this overgrown and spongy pork of forced hogs.

HEALTH AND DISEASE.

You will observe that I do not prrticularize any disease or its remedy—the reason is that I know nothing about disease in hogs. I have never had occasion to know—taking care of my hogs, feeding them regularly and paying attention to their litter and quality of feed. In nine years' experience in hog raising, I have had but one die—and that one I am constrained to think was bodily injured, as he became so weak in the hind quarters that he was unable to support that portion of his body, and died while in very good condition, showing no symptoms of disease.

KILLING AND CURING.

As to the killing of hogs, I presume that almost every farmer in the land knows as much as I do; at least, every one should. The butchering is a small matter—the work of a day—and I do not deem it necessary to insert my mode here, as all have nearly the same way of accomplishing this end. The way in which to realize the most money out of the hog meat is to cut every available scrap into sausage meat, and boil the rest into scrapple (curing only the hams,) and selling it while fresh, and the sooner the better, as both sausage and scrapple command a higher price early in the winter than at any other season.

The curing of pork is, perhaps, one of the most important matters in connection with the rearing of swine, and my mode I consider as one of the very best, from the fact that it never fails.

After the meat (hams or shoulders) is thoroughly cold, cut and trim the hams very close, then rub them well with salt, pack close in a barrel or tub, and after laying for three or four

PAGINATION INCO

and generally the same men have unimproved cattle, and work with the old wrought-iron and wooden plow.

After trying all sorts, the majority of Vermont wool-growers have settled upon the Spanish Merino, as best adapted to their soil and climate, and mountain pastures.

The average cost of keeping sheep, per year, is estimated as follows:—Illinois, 60 cts.; Iowa, 75 cts.; Michigan, 83 cts; Virginia, 60 cts.; New Jersey, 60 cts.; Maine, $1; Pennsylvania, 50 cts.; Vermont, $1,30; California, 75 cts.

The average increase, in Vermont, is 70 per cent.; in Ohio, 80; Virginia, 99; New Jersey, 80; Maine, 90. Still, Vermont leads all the States in wool-growing, and production of valuable sheep for sale, which we furnish to nearly all the other wool-growing States, which buy our bucks at $200 to $500, and ewes at $25 to $50 each.

In this day of trial of our country, there is no way we can serve it better, than in studying to improve it, and increase its wealth, and make wealth and civilization twin sisters.

WASHING SHEEP—OIL IN WOOL.

Mr. Marsh, of Clarendon, moved a vote of thanks for the address of Mr. Needham, and one thousand copies be printed for distribution. In regard to sheep without washing, he has fully tried both ways, and is convinced of the advantage of not washing. We can shear our sheep a month or two earlier, and they suffer less. I sheared May 1st, and it was followed by a cold storm; but I sheltered the flock, and they did not suffer as much as sheep often do in June, after washing and shearing; and he was satisfied that the sheep winter better if sheared early without washing.

Solon Robinson gave some information relative to sales of mutton sheep, and growing lambs for the New York market, and about the prospects that wool-growers have before them.—About washing sheep, he said that he had come to the conclusion, after careful consideration of the subject through a series of years, that a farmer cannot afford to wash. The manufacturer can cleanse the wool cheaper than the farmer. He urges farmers to carefully try the experiment to see which course brings the most money. He used to think it cruel to clip sheep very early in the spring, but has lately become satisfied that they suffer less than they do if washed and carry their fleeces late in June. Owing to the short supply of cotton, it is evident that we must clothe ourselves much more in woolens in future; and this will increase the demand more than wool-growers can supply at present high prices: and this should encourage them to persevere in all improvements. If the price again recedes, remember that New York always furnishes a market for over half a million sheep a year.

Nathan Cushing, of Woodssock, said that our fine-wool flocks have been continually improving for thirty years, and that it is an art to keep up improvement that must be learned; but it is worthy of the attention of Vermont farmers, whether they cannot profitably increase the production of mutton sheep. According to information given us by Mr. Robinson, it is a profitable branch of farming.

Judge Colburn, of Springfield, Vt., thought if all woolgrowers could be induced to adopt the rule not to wash sheep, it would be an advantage to the State. At present, the only discrimination in buying is to deduct one-fourth the price of washed wool, if the same grade is unwashed. If we ever adopt a rule to do away with washing, we shall get rid of very unpleasant, and some think unhealthy work.

A gentleman from Western New York said that the disposition of manufacturers to buy unwashed wool, was largely increasing. He knew one who tried five thousand pounds, year before last, as an experiment, which satified him so well that he bought eighty thousand pounds last year. In his own experience, he had proved that unwashed sheep winter better than they do when washed and sheared a month later.

A resolution was now introduced by some one, and read by the Secretary, that it is the sense of this Convention that we should strive to produce wool, and not oil. This was evidently intended as a hit at those who run upon a strain of sheep with very oily fleeces. The resolution was debated quite earnestly, and at first seemed likely to pass, but in the end would have been almost unanimously voted down, if it had not been withdrawn. So much for the advantage of discussion.

Judge Colburn thought, that although Vermont has the best flocks in America, we are tending too strongly toward producing very oily fleeces, which weakens the consitution of the sheep. Some of the high-priced bucks, sold to go West, have two pounds of oil to one pound of wool.

Solon Robinson thought it all resolved into

N INCORRECT

a matter of dollars and cents. If it is more profitable for a farmer to procure oily fleeces, he should not vote for this resolution. It is not a point of morality, but a point of interest that he has to settle; and he did not believe that it was for the interest of Vermont farmers, to adopt the spirit of this resolution.

Mr. Marsh thought, that it was not good policy to change our course of breeding, while we find ready sales for wool, and while the bucks that are most oily are sought after to cross upon Western native sheep.

Daniel Kimball thought, that voting for this resolution would tend to hurt the credit of Vermont sheep, as a sort of confession that they were generally too oily.

Mr. Lester, of Rutland, moved to lay the resolution on the table, as it was useless to adopt it, since farmers would raise such sheep as were most profitable.

Judge Colburn thought, that it would not be so easy for farmers to sell their wool in peace times, as now, full of grease and dirt.

Mr. Cushing said, that many breeders are now satisfied that very oily sheep are not as profitable as others that keep up the same fineness and length of fibre, with just oil enough to protect it. He is satisfied that very oily sheep are not hardy, and that some of the most profitable Vermont flocks show a small amount of oil. He has sheared bucks of this kind that have sixteen to twenty pounds of wool.

Geo. Campbell, of Westminster, thought that much of the oil was made by feeding; that he could by that means make the same sheep show more or less oil. He is sure that those that run most to oil are of a weaker constitution than others. He had traveled much in this country and Europe in pursuit of knowledge about sheep, and is satisfied that Vermont has the best stock in the world, better than Spain. He has tried all sorts, and settled upon the Spanish Merino as the most profitable breed; and he is also satisfied that it is not profitable to wash sheep, because by not doing it he can shear early, say about May 1st, and protect the sheep a few days, and they are not injured, and he thus saves wool. When he used to wash and turn out to pasture, much wool was lost upon briers and bushes. He is sure, that one year with another, his clip sells for more money unwashed than it would washed, and he saves the labor and health of his sheep. The wool clipped early looks better, and often is better than washed wool. Some buyers think that heavy fleeces must be dirty; and, to avoid this objection, he has divided and tied up two to a sheep, and then they sold without any objection. It is now ten years since he has practiced washing sheep.

Mrs. Francis D. Gage, who has so long been a contributor to our agricultural and other papers—like the sea serpent which had to be measured for a new sea to swim in—has departed on a tour of observation and duty, to the South Carolina coast, to look among the contrabands at Port Royal. A host of friends will wish her a pleasant voyage, and a safe return, and will be prepared to listen to her stories of Life among the Lowly, with interest and profit.

Whisky for Milk Sickness.—Mr. P. G. Gunkle informs us that he has successfully treated one of his cattle, afflicted with this mysterious disease, by administering large doses of whisky. The animal was in a bad condition, with little or no hopes of its recovery; and this experiment proving successful, he has great confidence in its efficacy; it is worthy of trial, at all events. —*Urbana Citizen.*

Flax Seed Crop.—A gentleman who has lately returned from the West reports that the crop of linseed will be very large this year, probably quadruple any previous year in Ohio, although in the vicinity of St. Louis, it will not be more than double, for the reason farmers could not procure seed enough to supply their wants at planting time. The high price of linseed last spring, and the low prices of corn, in consequence of the rebellion cutting off the Southern markets, is the cause of this great increase. The crop will be ripe about the 20th of July, and will come into market about the 1st of August. The present high price of Calcutta ($2,50 per bushel) will cause farmers to rush into market, and as the Western crushers contracted last spring for all they can now pay for, a large proportion of the crop will find its way eastward. Already large sales have been made for delivery in New York during August and September, at about $1,85 without bags. The crop of Ohio is now estimated at a million bushels, and if the rebellion continues, the West will in another year produce linseed enough to supply the United States, and have a surplus for exportation. The imports of late years into Boston and New York, from East Indies, were two or three millions of bushels.—*Boston Com.*

PAGINATION INCO

nual State Fairs, have been the centre of attraction for all sorts of visitors.

Swine.—The hogs were few, but just as handsome as hogs know how to be, both the large and small breeds. The great smooth Chester white, of the Brockway brothers, of the City Hotel, Cleveland, was a beauty.

Poultry, like swine, were few and good.

IMPLEMENTS, MACHINES, &C.

Agricultural implements were fair, mostly in the line of harvesters and plows. The large, miscellaneous display of Baldwin, Dewitt & Co., took quite a number of prizes, as the list will show. The plows from the Lagonda Works took 1st premiums; R. S. Rickey, of Cleveland, had a good show of iron beam Warren plows. G. W. N. Yost had a superior double plow, capable of being changed to a variety of uses, as jointer gang and sub-soil plow. Some of the newer harvesters have improved raking attachments, which promise well, particularly that on Brickerhoff's reaper.

Among household implements, the sewing machine and the clothes wringer were the principal, the new little sewing machine of Madame Demorest was an object of great attention, and the demand for machines was very pressing; the women are all clear carried away with it.

The Mechanical Department was very deficient; there being but little competition, most of the articles exhibited are enumerated in our list of awards. The same is true of most articles of Household Fabrics and other Domestic Industry.

FRUIT HALL.

The show of fruit was quite good, though not as extensive as it ought to have been. Complaints were made that the appearance and quality of the fruit crops were much damaged by drouth in Central and Eastern Ohio, and the time was too early for many grapes and pears to be ripe.

Apples were exhibited in great variety, and of good quality. The collection by Mr. C. Pease, (from Dr. Kirtland's orchard,) numbering over 150 kinds, was particularly interesting to nurserymen and pomologists; though larger and fairer specimens were shown in smaller assortments by L. Nicholson, E. Matchem, Sam'l Sloan, G. W. Doane, G. S. King, Mr. Gallup, and others—all of Northern Ohio.

Pears.—There was a finer display of this fruit than at any former Fair in Ohio. Besides the very extensive assortment of Messrs. Ellwanger & Barry, of Rochester, N. Y., numbering over 100 varieties, Bateham, Hanford & Co., of Columbus, had about 80 varieties, Charles Pease had about 60 varieties, Henry Hill (from Mrs. Hoadley's) about the same number, and Mr. George Powers, of Perrysburgh, nearly as many fine-grown specimens; while very good smaller lots were exhibited by L. Nicholson, Horace Kelley, E. Y. Hicks, and Joel Foote, of Cuyahoga county, and also by H. Brown, of Norwalk.

Of *Peaches*, the show was not creditable to Northern Ohio. The only respectable assortment was by Mr. Nicholson, though a single dish or two each, very good, were present from a dozen or more persons. Among these, was a very fine seedling variety, by Chas. Carpenter, of Kelley's Island, of the yellow-fleshed class, resembling Crawford's Early, but a little later, of rounder shape and finer flavor.

Plums were more abundant and finer than usual; Ellwanger & Barry exhibiting over 50 varieties, and citizens around Cleveland a dozen or so remarkably fine lots, of from one to ten kinds. This has been a favorable season for plums, or else our people are learning how to protect this fruit from the curculio.

Of *Grapes*, the show was very interesting and abundant as to variety, but lacking somewhat in quantity and quality, owing to want of ripeness. Mr. G. W. Campbell, of Delaware, and Chas. Carpenter, Esq., of Kelley's Island, each had over 20 varieties of hardy grapes, among them quite a number of choice new varieties. Messrs. Bateham, Hanford & Co., of Columbus, and several others, also exhibited smaller assortments. Mr. Harding, gardener for H. B. Hurlbut, Esq., of Cleveland, made a fine show with foreign varieties, grown under glass. Mr. H. P. Averil, of Perrysburgh, also had quite a number of very good specimens.

The Wild Fruits, Nuts, Acorns, &c., by Tho. Bushnell, of Hayesville, attracted much attention, as at several former Fairs. Mr. G. S. King, of Madison, had a smaller collection of a similar kind.

The Garden made a small show in the vegetable line, hardly creditable for a market stand; this is sheer neglect.

Floral Hall was tastefully got up and beautifully filled, mostly by contributions from the green houses of amateurs in Cleveland. Mr. Kirkpatrick and his fair assistants made this a place of beauty.

Fine Art Hall contained several excellent

N INCORRECT

portraits and a few good fancy pieces, but the bulk of the filling was the cheap saloon order.

BUTTER, CHEESE, &c.

The cheese dairies of all Western Reserve were represented by Messrs. Giddings, of Ashtabula Co., O., Carter, of Lake, and Bartlett, of Geauga. The stock of cheese was superb to look upon, and we know that of Mr. Bartlett was good to the taste. In the OHIO FARMER for March, 15, 1862, is a complete essay by this Mr. Bartlett, on the subject of cheese making, which, it will be well for dairymen to study. Mr. B. sold 700 cheeses from his shelves, weighing 120 lbs. each, at 7¾ cts. per lb.

Sheep and Wool.

Facts and Figures about Sheep.

[At the recent Vermont State Fair, there was a conference of Wool Growers, at which Daniel Needham, a well-known citizen of that State, made the following statements, as reported by Solon Robinson, of the N. Y. Tribune:]

We not only clothe ourselves neatly and comfortably, but in doing it we use up all the wool that the country produces, and large quantities of imported wool, beside imported fabrics.—Farmers, for want of information, disposed of much of their wool at ruinous sacrifices, when the war broke out—in this State below the cost of production.

In 1861, we imported $5,000,000 value of wool, and $28,000,000 value of woolen fabrics, and that was $10,000,000 less than in 1860. The range for three years has been $35,000,000 to $45,000,000. We import the products of thirteen millions of sheep, which we had better keep in this country. This proves that we are in no immediate danger of getting too many sheep.

The increase of population in the United States would require the wool of three millions of sheep.

No animals are so well adapted to Vermont mountain pastures as sheep, and none so productive.

In 1860, the number of sheep in the State was a little over a million, and the yield of wool a trifle over three pounds a head. By improved care, this yield has been largely increased.

In 1850, the total of sheep in the United States was 21,723,000, averaging two and a half pounds of wool per annum.

We read of the great care bestowed upon some of the fine-wool flocks of Europe, without seeming to be aware that equal care is bestowed upon some flocks in Vermont.

To show the need of protection to the wool-grower, as well as to the manufacturer, look at the prices of imported wool. In 1861, it averaged 11½ cents. It comes mostly from South America, where the principal cost of production is shearing the sheep.

While we can produce every grade of wool needed in this country, we should be independent of any other country. Protecting the manufacturer, does not wholly protect the wool-grower. One of the great needs of legislation is a repeal of the "reciprocity treaty," the benefits of which are all on the British side.

Give equal protection to all the great interests of the country, and all honest men will be satisfied.

The prospect of the next few years is very encouraging to the wool-growers. In consequence of the supply of cotton being cut off, we shall use more wool, beside the great demand for army purposes. We had no surplus last year, and the clip of 1862 was very early bought up, and the price has continued to advance.

The great practical question, and the one for which this Convention was called principally to discuss, is, how shall we prepare wool for market. Is it most advantageous to the farmer to sell his wool washed or unwashed? The buyers usually make about twenty-five per cent. difference between washed and unwashed wool, but no discrimination between that which is thoroughly clean, and that of a man who has only washed his sheep to make his wool sell at a higher price, while it is but little lighter than that sheared without washing the sheep. The conscientious man has but very little encouragement.

The question of the health of the sheep—whether it is injured by washing and carrying the fleece till very warm weather—is an important one for farmers to discuss, and, if possible, produce a uniformity of action.

The improvement of Vermont sheep has been wonderful. In 1840, there was not a buck in the State that would shear twelve pounds—now, there are plenty that yield twenty to twenty-five pounds; and it is not made up of oil and dirt, but will give sixty per cent. of genuine clean wool.

With such bucks to be had, there are men who still keep their old native stock of sheep;

PAGINATION I

days, make a brine of the following ingredients: To every 100 pounds of ham, allow 4 gallons of water, 9 pounds of salt, 4 pounds of sugar, 4 ounces saltpere, and 1 ounce saleratus. The brine should be boiled and the scum taken off; when cold pour it on the meat. From four to six weeks should be allowed, (according to size of hams,) for the meat to remain in pickle.—After the meat is hung up, allow two or three days to dry, then smoke with as little fire as possible. Use green hickory, with sassafras in small quantities. As soon as the meat is sufficiently smoked, each ham should be taken down and carefully wrapped in paper, then bagged to prevent the depredations of flies, and hung in a cool, dry place, out of the reach of rats and mice.—*Gates Henry, Schulkill Co., Pa., in Am. Agriculturist.*

Choice and Management of Pigs.

A writer in the London Gardener's Chronicle says, that in choosing the sow and boar of our white Suffolk breed, as much if not more attention should be given to the latter as the former. In selecting, the chief points are, a smallish head, with wide, heavy chops, short snout, broad deep chest, ears rather small and thin with ends sharp, pendulous, pointing a little forward; it should be round in the rib, short in the leg, with small feet, long body, the thigh well dropped close to the hock, shoulders and ham thick, and the neck rising well behind the ears; it should have small bones in proportion to the flesh, be broad in the back, and straight or slightly curved, with the tail small and curled and placed high, and the hair thin, long, fine and silky. By procuring animals of this description, you cannot fail to perpetuate good stock. Breeding too young, is a means of preventing their growing to a proper size, or acquiring sufficient strength. The proper time for a sow to begin to breed, is from 10 to 12 months old, and the boar from 8 to 12 months old.

The construction of piggeries is of great importance. What is required is a simple, economical, well situated and well planned piggery. A boarded building is by far the best. Fenders (like a bracket turned upside down) hung upon the wall of the piggery, prevents the sow from crushing the pigs to death in lying down. Each pen ought to be at least from eight to ten feet square, and the best floor is asphalte. False lattice floors can be laid on the asphalte in cold weather, and taken up once a week. A tank should be made just outside, to receive the drainage from the pens. The writer begins to feed his pigs when a few days old, with warm milk, mixed with a little sugar, and some very fine sharps for two or three days, (as an inducement to eat,) and a little white maize out of troughs. In the winter, he feeds all with warm food, but not in the summer. He gives them a great variety of meal—mangel wurtzel, swedes cut small allowing them plenty of clean water.

The writer, in conclusion, quotes the following from the report of a lecture recently delivered in Ipswich, by Mr. Stearn. The chairman of the meeting, Sir E. Kerrison, said he was some time since shooting over some land of a gentleman who cultivated the long pig. He left a few partridges and hares by the side of a hedge for a short time, and when he returned, he found two brace of partridges had fallen before these long hogs, and one of the hares was in course of digestion. That pig was almost as long as that table, and his ears flapped into two parishes. In his opinion, it was best to steer in the middle course—between the long and the short pigs.

Veterinary.

Sweeny, or Wasting of Muscles.

BY GEO. H. DADD, V. S., ST. LOUIS, MO.

Preliminary.—This affection is one which prevails very extensively among Western horses, and indeed has occasionally been present in all parts of the United States; yet very little of a reliable character has ever been written on the subject, hence, as a professed teacher of veterinary science, and not being willing to carry my knowledge to the grave, it becomes my pleasant duty to give your readers the benefit of my experience, and in so doing I shall endeavor to be brief, practical, and also to deal in facts.

Sweeny is a term used by husbandmen, signifying waste of muscles in the region of the shoulder-blade; professional men recognize the affection as *Atrophy*—wasting; a *gradual* or *sudden* diminution in the size of muscles of a region or of the whole body. When the affection is confined to the shoulder it is called local atrophy; and when there occurs a morbid and progressive diminution in the bulk of the muscles of the whole body, the disease is known as general atrophy, or *Marasmus.*

Medical writers generally contend that sweeny or atrophy is occasioned by faulty or defective nutrition, and is usually symtomatic. Ancient

ION INCORRECT

authorities say, that, in atrophy, the fat only is wasted. This is a great mistake; for a collapsion of the cellular, muscular and vascular systems, in a case of atrophy, is evidently apparent.

Pathology of Sweeny.—I now propose to discuss the theory of the pathology of sweeny:

I have had several opportunities of examining horses that have died in consequence of disease or old age, who during life were the subjects of sweeny, and I always found the muscles of the shoulder, or shoulders, pale-looking or bloodless; almost resembling the muscles of a calf that had been bled to death; the ordinary color should be a reddish-brown tint. The collapsion was not only confined to the muscular fibres, but it affected the blood-vessels, which appeared to be constricted; and the cellular membrane had almost disappeared, merely by condensation and contraction of the skin over the region of the parts; which contraction usually occurs in consequence of shrinking of the muscles beneath.

In conformity with the opinions of our veterinary authorities, I have hitherto in most cases considered sweeny as a symtomatic affection, from the fact that I have had to treat a number of cases similiar to the following:

A celebrated and valuable trotting horse, known as "Rocky," owned by a party in Cincinnati, became lame. The animal was treated for shrinking of the muscles of the shoulder blades, by setons, lotions, etc., and a long run at grass. The treatment extended over one year. The animal was finally purchased by Messrs. Mathews and McGibboney, of this city. On arrival of the animal I examined him and found that the sweeny was occasioned by contraction of the hoofs. I recommended a different course of treatment. The feet received special attention; and now the owners inform me that they have been offered $2,000 for Rocky, which only cost them $250.

In May, 1861, I was requested to see a grey gelding, aged eight years, which had recently been purchased as sound, etc. Shortly after purchase, it was discovered that the animal went lame, It was noticed that the muscles known as the anterior and posterior spinati (in the region of the shoulder blade) were wasted and it was evident that the animal had been treated for sweeny from the fact that the marks remained where setons had been introduced.

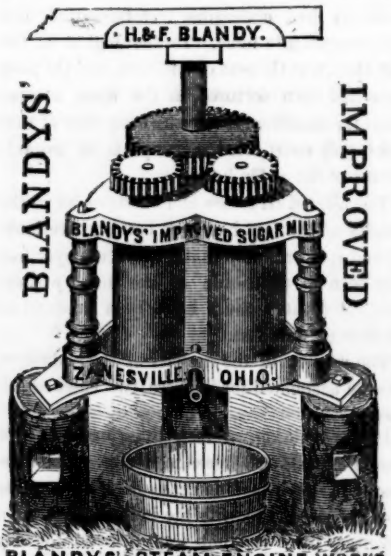
On making examination of the foot on the affected side, I found enlargement of the lateral cartilages had undergone transformation, and had changed into bone. In the region of the foot then, was the seat of lameness, and the poor brute had been tortured in the usual manner about the shoulder for the expectant cure of that which only constituted a symptom or organic disease of the coffin bone.

The altered structure and enlargement in the vicinity of the foot had been entirely overlooked, and it is probable that as my employer had only been in possession of the horse a short time, the creature must have been unsound at the time of purchase.

The wasting of the muscles of the shoulders, is to be accounted for in these two cases as follows:

It is a well known fact, that inaction of a muscle induces a decrease in its size. The muscles of laboring men decrease in size whenever from choice or necessity the individual leads a sedentary life. A limb kept at rest for any great length of time, always undergoes more or less atrophy (wasting). In these cases the foot diseases were not of that character as to cause the subjects much pain in progression; in order to relieve the feet they spared their muscles, which want of free and full action led to diminished nutrition and wasting—atrophy. Some of our readers must have noticed the fact of the shrinkage of the muscles of the haunch in case of disease or severe lameness of one of the hind feet. This shrinkage often occurs, as in the case of the shoulder, from want of natural action and full play of the muscles concerned. We have ample proof that the wasting is the result of want of action, in the fact, that when a horse becomes the subject of a painful disease in the hind foot, he neither advances or rotates the limb any more than he can possibiy help—but holds up the foot. On examination, the atrophy or wasting is confined to the muscles which perform these two actions; and in case of lameness or pain in one of the fore-feet, the same faulty action is observable, and the same class of muscles (whose action is almost identical with that of the hind parts) are the ones affected.

I deem it of great importance that husbandmen should fully understand this subject, for it will enable them to perceive that—while inflating horses' shoulders with a quill, or practicing any other absurd treatment in the vicinity of the wasted or sweenied shoulder—they are overlooking the real malady (in the foot), and at best are only treating symptoms. On careful examination, however, should it appear that the



BLANDYS' STEAM ENGINE WORKS
ZANESVILLE O.

Blandy's Improved Sugar Mills.

POOR Material, and poorer Workmanship, have been the leading characteristics of modern Agricultural Implements. The vexations attending breakage and getting repairs, deters many farmers from using them. This has been conspicuously so in Sugar Machinery, and without improvement on that hitherto sold, Sugar Culture will make slow progress in the North. We propose, in our

New Blandy's Improved Sugar Mill,

To remedy these acknowledged defects, as follows:—

1. Better Mechanical arrangements.
2. First-class material.
3. First-class work.

In a word, a STRICTLY FIRST-CLASS SUGAR MILL, pressing the cane closer, and with less power, than any heretofore or now in use.

We have now ready for delivery, seven sizes, double and triple rolls, single and double geared, vertical and horizontal, for horse-power. Large vertical or horizontal geared mills for steam or water power, and Blandy's Portable Steam Engines, suitable for them.

ALSO,

BLANDY'S PORTABLE

STEAM SUGAR MILL,

With Engine, Pan, &c., complete.

Contracts will be made with farmers or dealers for any size Mills or Steam Engines, for future delivery.

All the improved Pans are also ready for delivery.

Our reputation as Machinists is neither local nor national, but world-wide, and our good name and fame is too highly esteemed to be hazarded on inferior machinery for any purpose.

Cultivators and dealers may confidently rely on getting STRICTLY FIRST-CLASS MACHINERY.

We solicit early orders and contracts for immediate or future delivery.

Circulars forwarded to any address.

Orders, visits and correspondence solicited. Address

H. & F. BLANDY.
Blandy's Steam Engine Works,
Zanesville, Ohio.

aug16

WOODRUFF'S BAROMETER,

OR IMPROVED

WEATHER INDICATOR.

While in this age of invention and progress, our American Farmers have seized with avidity almost every invention and implement of husbandry that Art or Science could bring to their aid, one of the most important auxiliaries —the Barometer—has been almost entirely overlooked. This has arisen partly from a want of knowledge of its value and importance, but principally because the peculiar delicacy of construction, and high cost of the instrument have made it unavailable to the masses. In this instrument these objections have been entirely obviated. While its simplicity of construction, and scientific arrangement, render it perfectly portable and accurate, its cost is so low as to place it within the means of all. Indicating with unerring certainty [illegible]ing changes in the weathe[illegible] it also [illegible]ords a simple and accurate medium for measuring hights, while the accompanying Thermometer gives the temperature. The Scientific American, Profs. Williams, Carr, Holmes, Douglass, and a host of public journals and scientific men, recommend it as the *Agricultural Barometer, par excellence*, Profs. Henry, Hackley, Maury, Drs. Arnot and Dick, have computed that an annual saving of five per cent. on all crops, might be made by its use, thus affording an annual saving of over fifty million dollars to the farmers of the United States. It is simple, durable, accurate, perfectly portable, and very cheap; is nicely finished, and affords a very beautiful and ornamental piece of furniture, some of the carved cases being very elegant. We give below a brief description of it, from the accompanying cut, in which the cistern is seen divided to show its construction. The cistern, *A*, is of cast iron—cast with two compartments—partly filled with mercury. The tube *C*, filled with mercury, is sealed into the cistern, *A*, and being placed upright, the air is admitted by turning back the screw, *D*, which has a flat place filed in its side near the outer end, where air can pass through the outer wall, when the mercury takes its level, and it is in working condition. To make it portable, turn it upon its side, when the spare mercury runs from *B* to *A*, filling tube and cistern, *A*, full—turn in the screw, and it is shut to *A* perfectly solid, and may be thrown about with impunity, or carried by Railroad or Stage Express all over the world in safety.

Woodruff's Impr'd Weather Indicator

Has stood the severest tests of a great number of scientific men, and is amply recommended by eminent scientific authorities, who had previously discarded and condemned the Aneroid and other ordinary cheap Barometers. For evidence of this, we refer to the U. S. Coast Survey, Smithsonian Institute, and other eminent scientific authorities, whose certificates we have.

☞ AGENTS WANTED EVERYWHERE. Exclusive Agencies given.

☞ THERMOMETERS AND HYDROMETERS FURNISHED.

CHARLES WILDER,
Peterboro, New Hampshire

may19

Great Work on the Horse.

The Horse and His Diseases:

BY ROBERT JENNINGS, V. S.,

Professor of Pathology, Operative Surgeon in the Veterinary College of Philadelphia, Professor of Veterinary Medicine in the late Agricultural College of Ohio, Secretary of the American Veterinary Association of Philadelphia, etc., etc.

It Tells You Of Breeding, Breaking, Stabling, Feeding, Grooming, Shoeing, and the general management of the Horse, with the best modes of administering medicine; also how to treat Biting, Kicking, Rearing, Shying, Stumbling, Crib Biting, Restlessness, and other vices to which he is subject; with numerous explanatory engravings.

It Tells You Of the causes, symptoms and treatmen of Strangles, Sore Throat, Distemper Catarrh, Influenza, Bronchitis, Pneumonia, Pleurisy, Broken Wind, Chronic Cough, Roaring and Whistling, Lampas, Sore Mouth, and Ulcers, and Decayed Teeth, with other diseases of the Mouth and Respiratory organs.

It Tells You Of the causes, symptoms and treatment of Worms, Bots, Colic, Strangulation, Stony Concretions, Ruptures, Palsy, Diarrhœa, Jaundice, Hepatirrhœ, Bloody Urine, Stones in the Kidneys and Bladder, Inflammation and other diseases of the Stomach, Bowels, Liver, and Urinary Organs

It Tells You Of the causes, symptoms and treatment of Bone, Blood and Bog Spavin, Ringbone, Sweeney, Strains, Broken Knees, Wind Galls, Founder, Sole Bruises and Gravel, Cracked Hoofs, Scratches, Canker, Thrush and Corns; also of Megrims, Vertigo, Epilepsy, Staggers and other diseases of the Feet, Legs and Head.

It Tells You Of the causes, symptoms and treatment of Fistula, Poll Evil, Glanders, Farcy, Scarlet Fever, Mange, Surfeit, Locked Jaw, Rheumatism, Cramp, Galls, Diseases of the Eye, and Heart, &c., &c., and how to manage Castration, Bleeding, Trephinning, Roweling, Firing, Hernia, Amputation, Tapping, and other surgical operations.

It Tells You Of Rarey's Method of Taming Horses; how to Approach, Halter and Stable a Colt; how to accustom a horse to strange Sounds and Sights, and how to Bit, Saddle, Ride and Break him into Harness; also the form and law of WARRANTY. The whole being the result of more than fifteen years' careful study of the habits, peculiarities, wants and weaknesses of this noble and useful animal.

The Book Contains 384 Pages,

Appropriately illustrated by nearly One Hundred Engravings, and will be sent to any address post-paid on receipt of price; half bound, $1,00, or in cloth extra. $1.25.

We are also publishers of "EVERBODY'S LAWYER," by Frank Crosby, Esq.; "THE FAMILY DOCTOR," by Prof. H. S. Taylor, M. D.; THRILLING ADVENTURES AMONG THE EARLY SETTLERS," Warren Wildwood; SUNLIGHT AND SHADOW, or the Poetry of Home," by Harry Penciller; "LIFE OF KIT CARSON, the Great Western Hunter and Guide." MODERN COOKERY in all its branches, by Mrs. S. J. Hale; together with other valuable and useful works. a Catalogue of which will be sent free on application. Books forwarded to any address, postage paid, on receipt of price.

Photograph Albums in Great Variety.

Booksellers, News Agents, Book Agents, Canvassers, Peddlers and others will do well to order a package of our Books. They will find them exceedingly popular, and terms liberal.

1,000 Local and Traveling Agents

Wanted everywhere for their sale.

For single copies, or for terms in quantities, with other information, apply to, or address

JOHN EDWIN POTTER, Publisher,
aug16 1y No 617 Sansom St., Philadelphia, Pa.

LANDRETH'S

Agricultural and Horticultural

IMPLEMENT

AND

SEED WAREHOUSE,

Nos. 22 and 23 South Sixth Street,

PHILADELPHIA.

Nearly Three Quarters of Century Established.

Merchants and Dealers

Throughout the country supplied with Seeds in bulk, or in retail papers, as may be required.

PRICES TO SUIT THE TIMES.

LANDRETH'S

Rural Register and Almanac,

Furnished Gratis upon application.

The subscribers desire to call the attention of every one interested in Farming and Gardening, to their large and well selected stock of

GARDEN, GRASS, FIELD,

AND

FLOWER SEEDS.

Have been before the public for nearly THREE-QUARTERS OF A CENTURY. Their wide-spread popularity, and the increasing demand from year to year, are the best evidences of their Superiority over all others.

Bloomsdale, near Bristol, Penn.,

Our Garden Seed Grounds,

Contains Three Hundred and Sixty Acres,

AND IS THE

Largest Establishment of its kind in the world.

All not already habitual purchasers of

LANDRETH'S SEEDS,

And who recognize the justice of the adage, that the laborer, whether with head or hand, is "worthy of his hire," and who are willing to pay a fair compensation for the Seeds they require, are invited to make a trial of those GROWN AND PREPARED BY US, always accompanied by a guaranty of their good quality.

D. LANDRETH & SON,
aug16 **Philadelphia.**

PAGINATION I

The Farmer-Boy.

Oh, a jovial farmer-boy I'll be,
As fresh as the birds that sing,
And carol my merry song of glee
Among the flowers of spring:
With a whoop 'who-hoy!' to drive my team,
Before the rising sun,
To slake their thirst in a silvery stream,
Shall be my morning's fun.

To see the hungry porker fed,
And hear him grunt his thanks;
To rouse the calves from their grassy bed,
To shake their drowsy flanks;
To draw from the generous cow her store,
With young hands strong and free,
Till the brimming pail is running o'er
With the foaming luxury.

To haste to the garden with hoe and seed,
While the dew is on the spray—
To plant, to trim, to hoe and weed
The morning hours away—
To raise the flowers for the honey bee,
With their petals bright and fair—
Oh! I love the budding flowers to see,
In my garden here and there.

Or, away to the field with the reapers hie,
And toil the live-long day,
And think of the happy time, when I
Shall be a man as they—
To plow, to harrow, to plant, to sow,
The rich and fertile lands—
To reap and bind, to pitch and mow,
With strong and willing hands.

Oh! I would not live in the crowded town,
With its pavements hard and gray,
With its lengthened streets of dusty brown,
And its painted houses gay—
Where every boy his ball may bound
Upon his neighbor's dome,
And every shout and every sound
Disturbs some other's home.

The squirrel that leaps from limb to limb,
In the forest waving high,
Or the lark that soars with his matin hymn,
Is not more free than I.
Then give me the trade of a farmer boy,
From city trammels free,
And I'll crack my whip, and cry, 'Who-hoy!'
Oh! a farmer-boy I'll be?

AUNT FANNY.

THE DOLL'S MISSION.—The doll is one of the most imperious necessities, and at the same time one of the most charming instincts of female childhood. To care for, to clothe, to adorn, to dress, to undress, to dress over again, to teach, to scold a little, to rock, to cuddle, to put to sleep, to imagine that something is somebody—all the future of woman is there. Even while musing and prattling, while making little wardrobes and little baby clothes, while sewing little dresses, little boddices and little jackets, the child becomes a little girl, the little girl becomes a great girl, the great girl becomes a woman. The first baby takes the place of the last doll.—*Victor Hugo.*

Rearing Children.

The following rules for rearing children are deserving the attention of every man and woman:

1. Children should not go to school until six years old.

2. Should not learn at home during that time more than the alphabet, religious teaching excepted.

3. Should be fed with plain, substantial food at regular intervals of not less than four hours.

4. Should not be allowed to eat anything within two hours of bedtime.

5. Should have nothing for supper but a single cup of warm drink, such as warm milk and water, with one slice of cold bread and butter, nothing else.

6. Should sleep in seperate beds, on hair mattresses, without caps, feet first well warmed by the fire, or rubbed with the hands until perfectly dry; extra covering on the lower limbs, but little on the body.

7. Should be compelled to be out of doors for the greater part of daylight, from after breakfast until half an hour before sundown, unless in damp, raw weather, when they should not be allowed to go outside the door.

8. Never limit a healthy child as to sleeping or eating, except at supper, but compel regularity as to both; it is of great importance.

9. Never compel a child to sit still, or interfere with its enjoyment, as long as it is not actually injurous to person or property, or against good morals.

10. Never threaten a child; it is cruel, unjust and dangerous. What you have to to do, do it and be done with it.

11. Never speak harshly or angrily, but mildly, kindly, and, when really needed, firmly—no more.

12. By all means arrange it so that the last words between you and your children at bedtime especially the younger ones, shall be words of unmixed lovingness and affection.

The passing years drink a portion of the light from our cheeks, as birds that drink at lakes leave their footprints on the margin.

ION INCORRECT

WRITTEN FOR THE OHIO CULTIVATOR.

The Bee and the Butterfly.

As Fanny was walking in the garden one day,
Surveying the buds and the flowers,
A bee, gathering honey, came flying that way,
Improving the bright shining hours.

Pretty bee, said the maiden, come sing me your song,
You're so tidy, so trim, and so neat;
So cheerful and happy, as all the day long
You are storing your treasure of sweet?

Just then a gay butterfly fluttered close by,
Decked in gayest of purple and gold;
Its colors, so brilliant, quite dazzled the eye,
As, admiring, she turned to behold.

Dear me! what a creature of elegant taste,
So airy, so graceful, so gay!
Of time and of pleasure it is but a waste,
With this plain-looking bee long to stay.

'Tis well to be useful, I've always been told;
To be beautiful, far more I care—
Such prosy instruction is well for the old,
But 'tis not for the young and the fair.

So she followed the butterfly over the flowers,
Beguiled from the lesson of care,
Till the fast setting sun told that flown were the hours,
And she to her home must repair.

Late in autumn, one day, as she shivered to meet
The blast of the cold chilling storm,
See saw in the pathway, just under her feet,
The poor dying butterfly's form.

That moment, forthcoming from out its snug hive,
Came the bee, looking cozy and warm,
Still singing its song, and seeming to thrive,
Defying the cold and the storm.

Said Fannie, of this I will make a good use;
I will not be so foolish again—
For people of worth and true value I'll choose,
Before those who are showy and vain. X.

[NOTE BY THE EDITOR.—Poetically, this is a very good lesson, and our correspondent makes out an exemplary character for the bee; but entomologically, it is not true, since the butterfly, despite her idle and flaunting habits, goes into just as complete winter quarters, and again sends out her beautiful daughters, to run the same round of what we call a vain show. The fault of our judgment comes of applying moral law to things which are not amenable to such law. The bee and the butterfly are quite unlike, but both are perfect after their kind, as the good God made them to be. Let us read Nature aright, and we shall see harmony in all these things.]

A Maine editor thus distinguishes between different sorts of patriotism: "Some esteem it sweet to die for one's country; others regard it sweeter to live for one's country; and yet others hold it sweeter to live on one's country."

WRITTEN FOR THE OHIO CULTIVATOR.

The Sacrifice.

BY CARRIE CLARK PENNOCK.

Of what are ye thinking, ye who lie,
With the gaping wound, 'neath the broad blue sky?
Of what are ye thinking, ye who feel
The deathly touch of the foeman's steel?
And the young life ebbing, with steady tide,
From the bleeding wound in the quivering side,
And the parching lips, that to drink once more
From the mossy well, or the cooling spring,
Would gladly pass to the farther shore,
And the fadeless isles where the blessed sing:—

Oh! the pallid brow is damp and chill,
And the silken locks that the mother pressed
With her tender hand, and her warm tears bathed,
As she held her boy to her throbbing breast,
Are thickly matted, and covered o'er
With the yellow earth and the crimson gore.
And the feeble hand lies weak and still,
Too weak to shade, from the dying eyes,
The dazzling sun or the glaring cloud,
That stare from the vault of the noonday skies:
His feet are weary and soon shall yield
Their mite of dust to the battle field;
And the tongue is palsied, and ne'er can tell
How bravely he fought, and how nobly fell.

Thank God! in the last lone hour of death,
He was far away, where the native hills
Kiss the summer sky, and the glowing vales
Ring out through a ceaseless chime of rills,
He drank of the brook and the cooling spring,
And listed the songs she used to sing:
A father's blessing was on the boy,
And the mother smiled through her tears of joy;
His sister came, with her locks of gold,
And brought home shells from the pebbly strand;
And the blind old house-dog knew his voice,
And whined as he licked his sun-browned hand;
And the gray-haired nurse, that had rocked the child,
And trilled with a dulcet lullaby,
Knew his silken locks by her withered palm,
Though the light had fled from her aged eye—
All, all were there; there were birds and flowers,
That sang and bloomed through the summer hours;
And the waving trees, with their branches old,
Were enroofed with patches of blue and gold.

It was eve, and the father knelt to pray—
Death closed the scene, and the weary day
With a starry pall spread the lifeless clay.
He slept through the long, dark night, nor dreamed
Of the tented field or the battle's roar,
Nor came when the loud reveille called
From the mansions fair on the other shore.

Weep, mother, weep for the sinless babe,
That slumbered beneath your beating heart,
And drew its life from your yearning breast,
And wooed and won by its guileless art—
Weep, mother, weep for the noble boy,
That sleeps to-night on the tented plain;
And, father, brush off the blinding tear,
As you bind up the sheaves of the yellow grain,
For a still, white face, to the morning sky,
Looks up with a half-unclosed eye;
And a smile is stamped, like a dream of joy,
On the parted lips of your lifeless boy.

PAGINATION IN

patient is free from any disorder of the foot or feet, and on the other hand it is clearly evident that myositis, or myalgia, of the muscles exist, then the treatment must be directed to the affected parts—the facts in either case can only be determined by a competent practitioner.

In view of sustaining the proposition that *Sweeny is a symptomatic affection*, I might introduce a great number of cases that have come under my own observation but I do not wish to bore the reader, nor inflict a long article upon him; therefore I submit the preceding cases as a sample of all the rest which I might offer.—The malady may be of a different grade or character, but the primary disease of which sweeny is the result, originates often in foot lameness.

I now propose to show that sweeny is not always a symptomatic affection.

I have often noticed that when horses have been over-driven, or over-worked, they become stiff and lame in those parts of the body most susceptible to the ordinary influences; for example, one horse may perform a long journey with a weighty man on his back, and the next day the animal shows symptoms of lameness in the lumbar region; his back is arched; the limbs are brought under the centre of the body, and every movement indicates that the animal suffers tormenting pains, which are located in the muscles of the back; this is myositis, or inflammation of the muscular fibre; sometimes, however, the malady constitutes myalgia—muscular pain and spasm unaccompanied by inflammatory action.

Another horse may be put to a similiar kind of work, and in a few hours afterwards he is found very stiff and lame; but the symptoms are not the same as those just recorded; the pathology is probably identical; it is the same disease, only it has a different locality—it is myositis of the pectoral muscles, involving also the muscles of the shoulder blades. And the intelligent owner of the afflicted animal will notice that his fore extremities are unnaturally advanced; the fore parts of the body are unnaturally hot and tender; the fore-feet are feverish, and the hoofs are hotter than usual; the advanced position of the fore extremities and shoulders, give a very marked hollowness to the fore part of the chest, and many men, on seeing such a case would declare that the animals was chest foundered, this being the name which is sometimes given to such a condition; but really it is owing to myalgia—muscular pain and stiffness.

It is well known that all muscles are subject to inflammatory action and muscular pain from work disproportionate to their strength; for example, let any man undertake to saw wood, practice with heavy dumb-bells, or ride on a horse—feats that he has never been accustomed to—and whether the labor be excessive or not, the individual would shortly complain of more or less muscular pain, and if he be a weak man the more excessive will be that pain. Now the muscles of a horse being just as susceptible to pain as those of man, are just as easily operated on through the well known exciting causes.

In the case of a horse, when the work has been very excessive and of a character to bring the muscles of the shoulders, their tendons and coverings into a state of over-exertion, it will often be found that some of the muscular fibres in the region of the shoulder, are fractured, small blood-vessels are ruptured, and other pathological changes take place, this is followed by inflammation—myositis. Suppose, therefore, a horse shows symptoms of myositis after excessive work, and in the course of a few days it is noticed that the muscles of his shoulders are wasting away, and they continue to waste, so that all persons who examine the animal pronounce him sweenied—we may then infer that the wasting (sweeny) is not symptomatic, but is the result of myositis, the principal treatment for which is rest; afterwards diminish the work, and by proper diet and tonics increase the power to do it.—*Valley Farmer.*

Crops in Maryland.—The news of the threshing floors in the counties tells of short wheat yields, and of unfilled granaries, the result of the ravages of the new insect that destroyed so much of the oats. Eight bushels of wheat to the acres are reported as a common result. The Indian corn crop will prove a failure, owing to the drought. The melon crop is also a failure. Potatoes are abundant and excellent.

Canary Birds.—Having had much trouble in protecting canary birds from the attacks of the insects that infest them and the cages, I learned the following simple method of destroying these pests, which will, no doubt, be a useful piece of information to many of your readers: By placing every night over the cage a white cloth, the insects gather upon it, and in the morning may be seen by carefully examining the cloth. They may thus be soon removed, and then all that is necessary is to thoroughly clean and varnish the cage.—*New York Tribune.*

ION INCORRECT

The Kitchen.

BAKED EGG PLANT.—Divide a large egg plant into two portions, and remove the pulp from the shell. Boil the pulp until soft, and when well drained mash it; add crumbled bread, grated onion, sweet marjoram, pepper, salt, and two ounces of butter. When well mixed, fill the shells, and bake them for an hour in a moderately hot oven. The egg plant must be highly seasoned, otherwise it will not be so palatable.

BOILED OKRA.—In removing the okra from the stalk, it should not be cut too closely to the plant, as the juice will escape, and destroy the muculent quality of the plant. After throwing the okra into boiling water, add salt, and a very little saleratus. Boil rapidly for fifteen to twenty minutes, according to the age of the vegetable, and when cooked it should be immediately removed from the water. It should be cooked in an earthen vessel or one lined with China, as tin will discolor it. Season as desired.

MUTTON BROTH.—The best part for making broth is the chump end of the loin, but it may be made very good from the scrag end of the neck only, which should be stewed gently until it becomes tender; fully three hours or longer, if it be large, but not boiled to rags. A few grains of whole pepper, with a couple of fried onions and some turnips, should be put along with the meat an hour or two before sending up the broth, which should be strained from the vegetables, and chopped parsley and thyme be mixed in it. The turnips should be mashed, and served in a separate dish, to be eaten with the mutton, with parsley and butter, or caper sauce.

TO PRE-SERVE CRAB APPLES.—Take off the stems and core them with a penknife, without cutting them open. Weigh a pound of white sugar for each pound of prepared fruit; put a tea-cupful of water to each pound of sugar; put it over a moderate fire. When the sugar is all dissolved and hot, put the apples in; let them boil gently until they are clear; then skim them out and place them on flat dishes. Boil the sirup until it is thick; put the fruit in whatever it is to be kept, and when the sirup is cooled and settled, pour it carefully over the fruit. Slices of lemon, boiled with the fruit, may be considered an improvement; one lemon is sufficient for several pounds of fruit. Crab apples may be preserved whole, with only half an inch of the stem on; three-quarters of a pound of sugar for each pound of fruit.

Miscellaneous.

Seed-Time and Harvest.

Beneath a dark November sky,
With the cold rain falling drearily,
And the bleak wind moaning and shrieking by,
The seed o'er the land is cast:
And in gravel-like furrows the grain doth lie,
Till the weary months are past.

In curling mist and frosty air,
And weeping skies, it lieth there;
Or buried in the snow, or bare
To every wind that blows;
And Night's deep darkness, like despair,
Hangs o'er it while it grows.

It grows in spite of cloud and blast,
And sullen rain descending fast,
And snow-wreaths thickly o'er it cast,
And thunderous darkening skies;
The very tempest, roaring past,
Strengthen it as it lies.

Anon, a kindlier season shines,
And warmth and light, the spring's soft signs,
With many a beauteous blossom twines
The breast of icy earth —
And the grain, in delicate emerald lines,
Springs up — a fairy birth.

Then sunny months, in swift career,
Bring up the lusty ripened ear,
And the golden harvest-time draws near,
And the reaper whets his scythe;
Till, on a day, the rich sheaves rear
Their shapes on the landscape blithe.

Sown in the cold, dark, desolate days;
Reaped in the sunshine's mellow blaze:
Thus in the dim and wondrous ways
Of Fate are the deeds of men —
Sorrow and trial, defeats and delays,
Like storms that soften the grain,

Must test the heart's aspiring claim;
But every just and noble aim
Shall pass the ordeal clear of blame,
And in the appointed hour
Bring forth its fruit of wealth or fame,
Of knowledge, wisdom, power.

Sow, though in days of gloom, the seeds
Of manful toil and generous deeds,
Of stern self-sacrifice, that heeds
Little the world's behests;
Cast out the lying thought that pleads
"Enough, now take thy rest."

In the winds of Scorn, the storms of Hate,
In the darkness of hope deferred till late,
Through days when the world shows desolate,
Must sleep the good deeds thou hast done;
Faithfully labor — patiently wait —
Thy work shall see the sun.

That which was sown in the wintry air,
Shall blossom and ripen when skies are fair.
Though thine should be many an anxious care
Ere the harvest is gathered in —
Be stout to toil, and steady to bear —
The heart that is true shall win.

—*Chambers' Journal.*

OVER 2,500 IN USE.

HAS TAKEN THE FIRST PREMIUMS AT TWENTY NATIONAL AND STATE FAIRS.

DEFECATES THOROUGHLY WITHOUT CHEMICAL AGENTS.

Actual veritable sugar may be made upon it.—[N Y. Tribuue, Feb. 18, 1860.

Spoke well of it last winter. Further knowledge confirms our good opinion of it.—[Same paper, of October 13th, 1860.

No difficulty in making sugar on Cook's Evaporator.—N. York Evening Post.

Another years practice has confirmed the claim set up for this invention as being the only reliable sugar-making Evaporator in use.—[Field Notes.

THEY HAVE PLEASED

When in use, and their use is no about as extensive as the is grown.—[Prai. Far.

Cook's Sugar Evaporator!

The People

OF OHIO are spending immense sums of money yearly in AGRICULTURAL MACHINERY. How much of this is thrown away! 1st. By purchasing untried machinery. 2d. By purchasing machinery tried elsewhere and found wanting. The loss from these two causes alone, especially in

Sugar Machinery,

Is immense, as they generally include the loss of the crop. For example, in one neighborhood are fifteen acres of cane One man agrees to get the requisite machinery, but gets an untried Evaporator and FAILS; and as it is too late to get another, the crop is lost. The account then stands:

Loss, 3,850 galls. Syrup, $1,500.

Gain: sad but valuable experience.

Multiply this loss by the total number of poor machines sent out, and what mammoth proportions the loss assumes! 3d. Farmers lose by buying Evaporators which are infringements upon some prior patent, thus subjecting the farmer to prosecution and heavy damages *Practice true economy, therefore, and buy only* THE ORIGINAL —THE ONLY RELIABLE—**The Cook Evaporator.**

MANUFACTURED BY

Blymyers, Bates & Day,

MANSFIELD, OHIO.

In experimenting with and using Cook's Evaporators, last Fall, I think there is no more trouble in making good Sugar than there is in making *mush*. I do not think there is any danger of burning the Syrup on **Cook's Evaporator.**—[G. N. Brainerd, Marion, Iowa.

☞ All are hereby cautioned against purchasing other Evaporators embodying any of the principles of Cook's, as they are infringements, and will be duly prosecuted. aug20 4w

Most Rapid Evaporator in the World.

A GEM FOR THE MILLION.

MME. DEMOREST'S

RUNNING STITCH

SEWING MACHINE,

PRICE FIVE DOLLARS.

A PRACTICAL, rapid, efficient, and durable SEWING MACHINE, adapted to a large proportion of Family Sewing, or for manufacturing purposes. It is highly ornamental, and so light and portable, (weighing less than one pound,) that it can be conveniently carried in the pocket or reticule.

Its operation is so very simple that it requires but a slight degree of judgment to use it.

By the simple turning of a crank with one hand, and guiding the work with the other, it silently, yet very rapidly, with a common needle makes the running stitch exactly like hand sewing, only more perfect and regular.

It will hem, gather, ruffle, shirr, tuck, run up breadths, etc., with a single or double thread on any material adapted to the running stitch, from the lightest and thinnest up to two thicknesses of ordinary silk or muslin. The thinnest, usually the most difficult to stitch by other sewing machines, being sewed the easiest. For ladies' and children's apparel, and other articles made of light fabrics, it will therefore be found almost invaluable.

It is attached to the table like a sewing bird, and having no tension, and requiring no lubrication or change of stitch, is always ready for operation, and such a marvel of simplicity that a child of six or eight years can understand it immediately, and use it successfully.

It is not at all liable to get out of order.

Each machine is put up in a neat box, accompanied with full and explicit directions, and twenty-five needles

Sent to any address in the United States on receipt of an order, inclosing the amount, or may be collected by Express on delivery of the machine.

Liberal arrangements made for agencies.

Every Mother, Dress-Maker, Milliner and Lady should have one of these sewing machines. Address

MME. DEMOREST,

473 Broadway, N. Y.

General Agent for Ohio.

A member of our family having been appointed by MME. Demorest as General Agent for this Sewing Machine, for the State of Ohio, orders for the same may be addressed to,

S. D. Harris,

Columbus, O.

MANSFIELD'S IMPROVED CLOVER HULLING,

AND CLEANING MACHINE.

HULLS AND CLEANS from 3 to 10 bushels per hour —late improvements Patented May 14th, 1861, and March 25th, 1862. Full description of this great Machine sent gratis on application. Made and for sale by

M. H. MANSFIELD,

aug30 4t c8 3t Ashland Ohio.

THE BEST OF HOGS.

J. J. SCARFF, Breeder of CHESTER WHITE AND POLAND HOGS, and also a cross of the Chester and Poland, warranted to be full blooded. Pigs boxed and shipped to all parts by Rail, price varying from $5 to $10, according to size.

New Carlisle, Clark Co., O. sept6

ALDERNEY BULLS.

THREE YOUNG ALDERNEY BULLS, OF ALEXANDER'S STOCK—two Calves and one Yearling—price, $30 to $50 each. Apply to

JOHN F. DAIR & CO.,

40 & 42 East Pearl Street, Cincinnati.